



**A COMPLETE GUIDE
TO PAINTING MINIATURES**

CONTENTS

[Introduction](#)

[Terminology in the hobby](#)

[Equipment and supplies](#)

[Brushes and maintenance](#)

[How to cut from the sprue](#)

[How to remove mould lines](#)

[How to assemble your minis](#)

[How to fill gaps and seams](#)

[How to prime your miniatures](#)

[Zenithal highlighting](#)

[Painting your miniature](#)

[Types of paint](#)

[How to use a wet palette](#)

[How and why to thin your paints](#)

[Brush control](#)

[How to apply transfers](#)

[How to strip your miniatures](#)

[Basing your miniatures](#)

[Painting styles](#)

['Eavy metal](#)

[Grim-dark](#)

[Comic style and cell shading](#)

[Slap chop](#)

[Ultra-realism](#)

[Painting techniques](#)

[Edge highlighting](#)

[Blending](#)

[Dark lining](#)

[Recess shading](#)

[Washes](#)

[Feathering](#)

[Layering](#)

[Glazing](#)

[Dry-brushing](#)

[Stippling](#)

[Wet blending](#)

[Weathering](#)

[True metallic metallic \(TMM\)](#)

[Non-Metallic metallic \(NMM\)](#)

[Object source lighting](#)

[Advanced](#)

[Colour theory](#)

[Airbrushing](#)

[Kit-bashing and sculpting](#)

[Photography](#)

[Hobby storage and hobby space](#)

[Free Tutorials](#)

INTRODUCTION

Hello I'm Norm, also known as [diceandpigment](#) on social media platforms where I share my passion for the miniature hobby. Before you dive into this miniature painting guide, let me share a bit about myself, the guide, its purpose and why I created it.

Like many, my journey into the world of miniature models began in childhood (around the age of 7) extending through my early teens. However, the hobby took a backseat for many years until a resurgence in 2023. I'm a relatively new Dad and I wanted something to do with my time during the evenings when things were a little quieter. I picked up a Warhammer Combat Patrol with the intentions of learning to play the game with some friends however, to my surprise, the painting aspect of the hobby captivated me far more and the rest -as they say- is history!



My friends often label me as someone who easily gets absorbed in things that catch my interest and that's precisely what happened when I first ventured into the world of miniature models. I've immersed myself in a sea of videos, devoured numerous tutorials, and sought out the best equipment and knowledge to ensure I cover all bases in the miniature painting hobby aiming for every possible advantage. However, I recognise my tendency to dive deep into research can be a flaw; I could probably learn even more by getting hands-on and learning from my mistakes rather than spending excessive time on research.

Throughout the past year, I've documented almost every piece of knowledge I've acquired, creating a personal reference hub for quick access. This wealth of information stems from tutorials, YouTube videos, books, and, most importantly, the supportive community within the hobby. The generosity of fellow enthusiasts has proven invaluable, offering a huge amount of tips and ideas to improve my skills.

Recently, as I worked through my information collection, I came to realise the extent of my research efforts. What started as a personal repository had evolved into a practical guide for my weekly miniature painting endeavours. I documented tutorials, equipment reviews, guides and amassed hundreds of useful links. Recognising the potential value for others, I decided to transform this into a comprehensive guide freely available to everyone. When I re-entered the hobby, the vast amount of scattered information online felt like a maze. My

hope is that this guide streamlines the knowledge, bringing it together in one accessible place to make navigating the miniature painting world a bit easier.

When I committed to creating this guide, I understood there was much more to discover and plenty of information still to acquire. In the past few months, I've collaborated with fellow hobbyists to gather the necessary knowledge and information bringing the guide to its current state. I hope you'll find it comprehensive. The information and images in the guide are sourced from publicly available material or generously provided by hobbyists who allowed their work to be featured in this guide.

The guide goes by the name "A Complete Guide to Painting Miniatures" and I aspire for everyone in the hobby to find value in it and learn something new. Covering everything from basic techniques to the more advanced aspects, this guide is meant to be a go-to resource for the community. Ultimately, I crafted it as a "Hobby Bible", aiming to save others time by providing answers to a wide array of questions I have found myself asking since returning to the hobby.

While you can already access and read this guide, I hesitate to label it as finished. I envision it as a resource that evolves alongside the hobby and its frequent innovations. So, if you ever feel there's something lacking or could be improved, I encourage you to reach out. Your feedback is invaluable and I'm more than willing to implement changes, ensuring a more positive experience for fellow hobbyists using the guide.

This guide is, and always will be, entirely free for anyone to utilise. I didn't create it for profit, but some generous individuals express their gratitude with a tip which I truly appreciate but it's by no means obligatory! If you're inclined to make a donation, you can do so [here](#) knowing that 100% of contributions will go towards benefiting the community projects I undertake. As you may already know, I organise painting competitions and sometimes offer giveaways within our community. Any money raised will be used for upcoming projects that share the same creative spirit. So, a heartfelt thank you for your support!

I genuinely hope you discover value in this guide. Don't hesitate to share it and I welcome your thoughts and feedback on my Instagram page [@diceandpigment](#).

Thanks,

Norm

TERMINOLOGY IN THE HOBBY

When you are first introduced into the hobby and begin exploring various artists, you might observe the use of specific terms in their videos and tutorials. The list below is intended to provide definitions for certain aspects and aims to assist you in grasping their meanings.

Base Coat	The initial application of paint that lays the foundation for a miniature's colour scheme.
Basing	Enhancing a miniature's base with decorative and stylistic elements.
Blending	Applying paints to create a smooth transition of colours.
Brush Control	How to use a paintbrush to achieve desired effects and precision.
Colour Theory	The science and art behind using different colours.
Colour Wheel	A circular representation of visible colours showcasing their chromatic relationships.
Contrast	The distinction between light and dark areas on a miniature employed to establish definition and captivate visual interest.
Dark Lining	A technique involving the application of a thin line of dark paint at colour intersections creating the illusion of depth.
Dry-Brushing	A painting technique to highlight raised areas and textures on a miniature by applying paint with most of it removed from the brush bristles.
Edge Highlight	The application of a bright highlight colour to the edges of a miniature which enhances contrast and definition.
Feathering	A blending technique, employing a back-and-forth or zigzag motion to pull and push paint creating a smooth gradation or transition.
Freehand	The art of painting intricate designs or patterns directly onto the miniature, showcasing the artist's skill and creativity.
Flecking	A technique involving the application of thinned paint or ink, sprayed across a miniature's surface using the bristles of a toothbrush or another tool, creating a distinctive splatter pattern.
Glazing	A painting technique where thin, transparent layers of paint are delicately applied to alter the colour of the underlying paint.
Highlights	The application of a lighter colour to the raised areas of a miniature aimed at creating contrast and definition.
Layering	The method of constructing colour, highlights and shadows by applying thinned paint over an underpainted or base-coated surface.
Masking	The process of shielding a section of a model with tape or another medium to prevent paint from being applied to that particular portion.

Non-metallic Metal (NMM)	A painting technique that replicates the appearance of metal, without using metallic paints relying on various colours to achieve the effect.
Object Source Lighting (OSL)	Employing paint or ink to simulate the light emitted from an object enhancing the realism of the miniature.
Pinwash	A precise washing technique that targets specific recesses or shadowed areas on a miniature.
Primer	The application of a primer to a miniature's surface using a spray can, airbrush, or brush, preparing it for subsequent layers of paint.
Shading	Incorporating darker areas into a miniature to replicate natural shadows and enhance depth.
Sketching	The initial application of rough paint coats on a miniature to explore ideas or colour schemes, to be refined in greater detail later.
Stippling	The technique of applying small dots paint using the tip of a paintbrush to create texture or effects.
True Metallic Metal (TMM)	A painting technique that utilises metallic paints to replicate the appearance and sheen of real metal on a miniature.
Value Sketching	The application of whites, greys and blacks to establish highlights and shadows on a miniature before introducing colour.
Value	A measure of the lightness or darkness of a colour.
Viscosity	Refers to how thick or thin the paint is.
Washing	The application of a thin, translucent layer of paint to create shading and enhance the contours of a miniature.
Weathering	The application of techniques to give a miniature an aged or worn appearance, often achieved through chipping, rusting, or streaking effects.
Wet Blending	A painting technique where two colours are blended directly on the model whilst they are still wet, allowing for a seamless transition between the hues.
Wet Palette	A tool designed to keep paint moist and workable during the painting process, typically composed of a tray with a damp sponge and a semi-permeable membrane.
WIP	Work in Progress.

EQUIPMENT AND SUPPLIES

What this section covers:

- Essential equipment
 - Optional equipment to enhance your hobby
 - Why we need certain tools
 - Equipment options and where to get them
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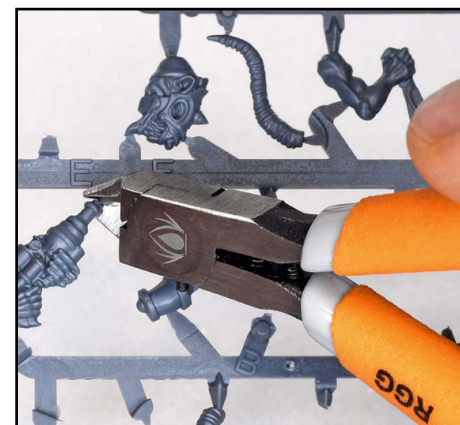
Having the right gear is crucial for your hobby. Some items are must-haves and others can elevate your experience. While personal preferences may play a role in choosing specific tools, the majority of enthusiasts in the hobby rely heavily on the items listed below one way or another. You'll notice that certain options come in both budget-friendly and pricier versions. While it's often true that opting for the cheapest isn't always the ideal choice, some folks have budget constraints and need to make do with what they can afford and hopefully the list below caters for your needs whatever the budget. If you're just starting out in the hobby, it's recommended to get the essential equipment needed and upgrade or add to it as you go along.

Certainly, there are many smaller choices that won't be featured here but may be mentioned in other sections of this guide. Listing every piece of equipment relevant to the hobby would make this guide endless. You'll likely discover the need for such items as you develop your own style and find yourself reaching for tools not currently in your arsenal.

Essential Equipment

Sprue Cutters

You could begin with budget-friendly sprue clippers like [these](#), which do remain useful even as you advance in the hobby. However, adding pricier options such as these [Redgrass Games Precision Nippers](#) to your toolkit will definitely bring advantages. With a flatter side and more precise blade, they effortlessly cut through sprue, minimising mess. A quality pair ensures precision, allowing you to cut close to the miniature for easier cleanup and reduces stress on the plastic. While the Redgrass Games Nippers are a splurge, they promise efficiency and tidiness in removing miniatures from the sprue. You can find the full guide on how to remove your miniature from the sprue [here](#).



Precision Nippers

Glue

Glue plays a vital role in the hobby serving multiple purposes. It's instrumental in assembling miniatures and proves invaluable for conversions and repairs.



Tamiya Cement

For plastic miniatures, Tamiya Cement is a top choice amongst hobbyists. Known for its robust bonding, quick drying and precision applicator, Tamiya cement excels in creating seamless and durable connections between plastic parts. The precision applicator ensures controlled application resulting in professional-looking assemblies.

When working with metal or resin miniatures, super glue becomes essential. Unlike plastic cement, it forms strong bonds with these materials. It is important to look for a super glue with a well-designed nozzle for precise control over the glue flow.

You can read the guide on how to effectively glue your miniatures [here](#).

Primer

Primer is a preparatory layer applied before painting miniatures that enhances paint adhesion. While common colours like black, white or grey are standard, certain brands offer an extensive palette of over 25 colours providing a diverse range.

For a reliable, all-purpose primer, consider Hycote Black. This budget-friendly option, priced around half of leading brands, exhibits excellent adhesion to plastic, metal and resin. If you seek coloured primers to complement your base coat, explore [Colour Forge's](#) highly recommended range, complete with a Paint Conversion chart for matching across different brands.

Paints

Paints are indispensable as they bring life, colour and detail to our miniatures. They allow hobbyists to express creativity, personalise their miniatures, and enhance the overall visual appeal, turning a bare sculpted figure into their own unique work of art. Whether it's achieving realistic textures, vibrant colour schemes or subtle shading, paints are essential tools that transform our miniatures.



Many beginners in miniature painting often start with acrylic paints and they are definitely going to be on your essentials list to begin with. Acrylic paints are widely used in the hobby due to their versatility, accessibility and ease of use. They come in a variety of colours, dry relatively quickly and can be thinned with water for different effects.

While we can't cover all the diverse paint types and brands in this equipment section, you can explore a comprehensive breakdown of various paints, their brands and their specific uses in this detailed write-up available [here](#).

Brushes

A diverse array of brushes in different shapes and sizes is a must-have - after all, painting simply wouldn't happen without them! Recognising the importance of brushes within the hobby, we've devoted a whole section to brush selection and maintenance which you can find [here](#).



Redgrass Gaming Wet Palette

Wet Palette

While some may not view a Wet Palette as a must-have tool, its importance shouldn't be underestimated. A wet palette - a simple yet invaluable tool - prolongs the workability of acrylic paint. It is essentially a water-soaked shallow container, with a porous material layer, allowing for easier colour blending and preventing paint from drying out during lengthy painting sessions. Additionally, it serves as an ideal palette for thinning paints. Further details on how to use a wet palette and thin your paints can be found [here](#).

If it fits your budget, you can opt for a pre-made wet palette equipped with a sponge and palette paper sheets. Notable examples of such palettes include those from Redgrass Games and The Army Painter. Alternatively, creating your own wet palette is both straightforward and cost-effective. All it takes is a plastic container, some kitchen roll and parchment paper. Remarkably, a DIY wet palette can perform just as well as, if not better than the brands mentioned above.

Brushstroke Painting Guides have an excellent and easy to follow guide on how to make a Wet Palette which can be found [here](#).

Optional Equipment

Hobby Lamp

A hobby lamp is not strictly essential for painting miniatures, however, it can significantly enhance the overall painting experience and greatly improve the quality of your work. A good quality lamp provides bright and even illumination, reducing shadows and glare. This helps you see the details of your miniature more clearly, making it easier to paint accurately.

Proper lighting is crucial for high quality miniature painting, offering benefits such as accurate colour perception, reduced eye strain in the form of adjustable brightness and colour temperature. It also gives you the ideal conditions for maintaining a uniformed paint job and enhances your overall productivity through improved visibility.



Brighttower Tabletop LED Lamp

While some fortunate artists enjoy painting in well-lit spaces during the day, many others - especially those who paint in the evening - may not have the luxury of ample natural light. In such cases, a hobby lamp becomes, not just a convenience but, arguably, an essential tool for optimising your painting experience.

[Geek Gaming Scenics presents a video](#) that brilliantly compares a couple of lighting options, showing both budget-friendly and premium choices and the differences between the two.

In the realm of budget options, the [Brighttower tabletop LED lamp](#) stands out as an excellent product, priced at approximately £30. It delivers high-quality lighting when used correctly and, in terms of budget options, it's probably as good as it gets.



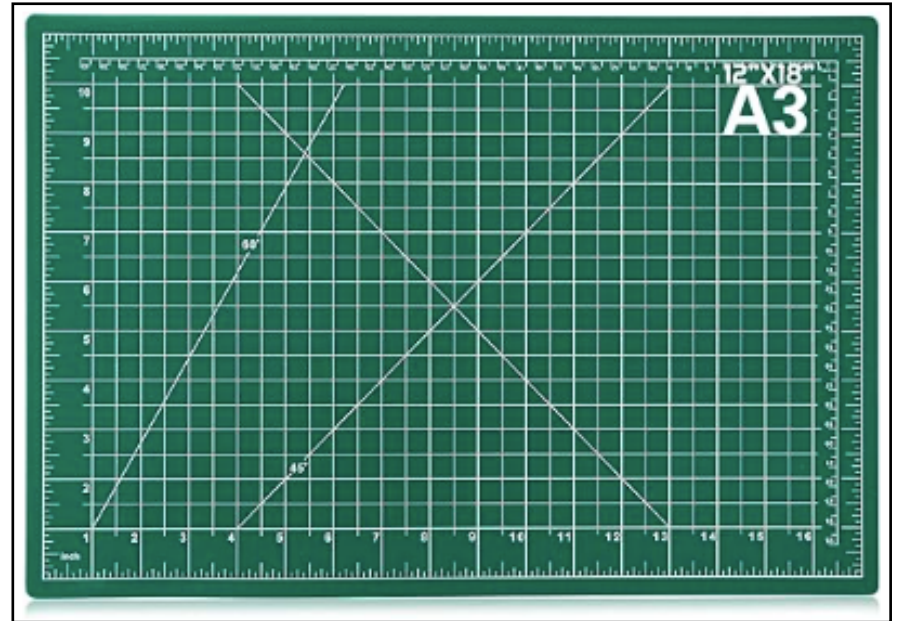
On the other end, the [Neatfi XL 2,200 Lumens LED Task Lamp](#), while more expensive, offers superior performance. This powerful and versatile lighting solution is crafted for diverse tasks, featuring an XL size that indicates a broader coverage area, making it ideal for larger workspaces. The lamp includes adjustable features such as colour temperature and brightness levels, allowing users to tailor the lighting to their

preferences.

These choices cater to both budget-conscious buyers and those seeking higher quality products, offering an excellent addition to your hobby space that aligns with your financial preferences.

Craft Mat

A self-healing craft mat is great for miniature modelling in your hobby space because it protects your table and bounces back after cuts. It gives you a smooth and stable surface for working on miniatures, making it easier to cut, glue and paint without damaging your table. Plus, it's easy to clean and helps keep your workspace in good shape for your hobby. Any self-healing mat should work well, [like the one](#) available on Amazon. Just be sure to choose the right size for your hobby space.



Brush Care Products

Brush care is crucial in miniature painting to maintain the quality and lifespan of your brushes. Proper care ensures that your brushes stay in good condition with well-defined tips and preserves the brush's effectiveness over time, extending their longevity. You can find out more about brush maintenance [here](#).

Brush soap is the top pick for cleaning and maintaining brushes, effectively eliminating paint residue and debris from the bristles. [The Masters Brush Cleaner and Preserver](#),

available on Amazon, stands out as the perfect choice and comes highly recommended in the hobby.

Files / Sanding Tools

Files, sanding sticks and pads are used to shape and smooth surfaces. Files are handy for removing larger amounts of excess material or specifically for metal miniatures. Sanding sticks and pads, on the other hand, help achieve a smooth finish by gently sanding surfaces, perfect for eliminating rough spots and preparing the miniature for painting.

Consider this [10-piece Diamond Needle File Set](#) available on Amazon when shopping for files. They're not only perfect for the job, but also come at an extremely affordable price.

These [sanding sticks](#), also found on Amazon, are an ideal choice. Available in a 10-pack with various grits, they are perfect for achieving a smooth finish on flat surfaces. Plus, their affordability makes them another practical option.

When it comes to sanding pads, the [Green Stuff World set](#) is exceptionally practical offering an assortment of grits. Ideal for sanding curved edges, these pads can be easily cut to reach even the most challenging areas.



You can check out our guide on how to clean up your miniatures and for more information how to use these tools [here](#).



Hobby Knives / Mould Removing Tool

Hobby knives and mould-line removing tools are essential for efficiently refining your miniatures, ensuring a flawlessly polished finish. For plastic models, a [mould-line remover](#) like the one from Hobbies is generally sufficient, although some prefer the precision of hobby knives for intricate areas. When working with metal models, sharper tools like [these Hobby Knives](#) from Amazon are more effective, but caution is advised due to

their sharpness. Check out our guide on removing mould lines and cleaning miniatures [here](#) for a more detail on this procedure.

Painting Handles

Miniature painting handles are designed to securely hold the miniature whilst allowing you to access all angles without directly touching the painted surfaces. Painting handles provide a stable and ergonomic grip, reducing hand fatigue and ensuring steady control over the miniature during painting. By holding the miniature with a handle, you're able to avoid touching wet paint or delicate surfaces and prevent accidental smudges or damage. Handles allow the modeller to rotate and tilt the miniature easily which ensures access to all angles for thorough and precise painting. Using a painting handle also ensures contaminants from your hands don't make their way to your miniature as oils and grease may cause the surface to become hydrophobic and prevent the paint from adhering.

For an affordable alternative to a commercial painting handle, you can easily craft one yourself! A popular DIY approach involves using everyday items like wine corks, plastic shot glasses, or small empty containers as improvised holders for your miniatures. Corks work exceptionally well for sub-assembled and pinned parts allowing you to insert the pin directly into the cork. If your miniatures are already based, opt for shot glasses or small containers; just attach the model to the handle using some putty or tac for a quick and budget-friendly solution.



For those looking beyond budget constraints, the [Hobby Holder by Game Envy](#) is an excellent choice. This tool lets you attach miniatures to the handle using standard 28mm bottle caps or even wine corks for pinning purposes. It has 360-degree rotation to ensure extra precision during your painting process. Additionally, the handle is detachable allowing you to maintain a secure grip by holding onto the added stability bar for more control.

Hobby Drill

A small modelling drill is a commonly used tool in the hobby for creating precise holes, facilitating assembly and customisation. You may find yourself often needing to sub assemble miniatures using pins or other connecting elements. Small drills make it easy to create holes for these components ensuring secure and stable connections. You may also want to modify or convert your models. Small drills enable you to add details such as drilling holes into the barrel of a gun to make it look more realistic which enhances the overall detail of the final



Hobby drill

miniature. It is a necessary tool when pinning models to reinforce weak joints or connecting parts of a miniature when glue alone isn't enough to secure the bond.

This [miniature hobby drill](#) available on Amazon is a great choice. However, it's worth noting that the accompanying drill bits may sometimes fall short in terms of quality and performance. For a better drilling experience, consider complementing this tool with a set of [jeweller's drill bits](#), and you'll be well-equipped with everything you need.

Magnifier

Magnifying glasses and other magnifying options are used to provide a closer and enlarged view of small details and help reduce eye strain. These tools come in various forms including standalone magnifying glasses, magnifier lamps, or visors with built-in magnification.

Geek Gaming Scenics provides an insightful [video](#) comparing reading glasses, magnifying glasses and magnifying lamps. The truth is, the preference for these tools often boils down to personal choice and the good news is that you can acquire these options without breaking the bank. Among the various choices, magnifying visors or simple magnifying glasses usually rise to the top as favoured selections.

For those mindful of their budget, these straightforward [reading glasses](#) prove to be an excellent option. You might want to grab a couple of pairs with varying magnification strengths to cater to different needs.

If cost is not a concern, you might want to try these [head-mounted magnifying glasses](#). Not only do they feature an LED light, but they also offer a substantial 14x magnification, providing a premium and illuminated magnification experience.



Airbrush

An airbrush is a valuable tool in miniature modelling for achieving smooth finishes, creating gradients, saving time on large surfaces, and allowing for both efficient coverage and detailed work on miniatures. It operates by using compressed air to atomise paint, creating a fine mist that can be applied smoothly to miniature surfaces.

While budget-friendly airbrush setups are available, it's essential to note that a compressor is a necessary addition which contributes to the overall cost. Realistically, you can expect to invest over £100 for more economical setups and £400 or beyond for superior, higher-quality gear.

Once you've honed your skills, the use of an airbrush can yield exceptional effects on miniatures. If you like the idea of adding an airbrush into your toolkit, delve into our guide for insights on how to [effectively use an airbrush](#) and recommendations on noteworthy brands.

Vortex Paint Mixer

A vortex paint mixer is a type of machine used to mix paint or other liquids by creating a vortex or whirlpool effect. This helps to thoroughly mix the components of the paint, ensuring a consistent colour and texture. The mixer typically consists of a motor that spins a propeller or paddle at high speeds, creating the vortex motion in the container holding the paint. Vortex paint mixers are commonly used in paint shops, laboratories and industrial settings where precise and efficient mixing is required.



While it's not essential, using a mixer can save you considerable time and effort. Plus, it guarantees that your paints are thoroughly mixed, which is crucial for achieving the best results.

Hairdryer

A hairdryer can be a handy tool for miniature painting. Its warm, dry air speeds up paint drying, making you more efficient and enhancing the quality of your work. This is especially helpful for techniques like glazing, where thin layers are key but each layer must dry completely before the next one. Just remember to use the hairdryer on a low heat and air setting to protect your miniature from damage. Holding it too close or using high heat can melt the plastic. You don't have to break the bank on this. An [affordable travel hairdryer](#) from Amazon will do the trick.

Storage

Storage systems are essential for maintaining order, improving efficiency, providing protection and enhancing the overall visibility of both paints and models in your workspace. In the realm of miniature hobbies, numerous storage solutions exist for paints, tools and models, exceeding the scope of this recommended equipment list. If you're keen on exploring your storage choices, including paint stations and miniature storage solutions, then take a closer look [here](#) at some of these products and our thoughts on them.

BRUSHES AND MAINTENANCE

What this section covers:

- Why brushes are important
 - Choosing the Right Brush
 - Brush size and types
 - Synthetic vs. Kolinsky Brushes
 - Brush Care
-

Painting miniatures involves a variety of brushes, each designed for specific tasks and techniques. The choice of brushes depends on factors such as the size of the miniature, the level of detail required and the painting technique being employed.

The world of paint brushes might initially feel overwhelming, but it's simpler than it first appears. Your essential brush collection should include tools for base coating, layering, glazing, fine details, dry brushing, stippling and any other techniques you might want to explore. Whilst some brushes can serve multiple purposes, it's crucial to consider that certain techniques can wear down your brushes more quickly. Therefore, it's wise to reserve your more expensive brushes for specific tasks. Discovering the right brush for each job is a key aspect of the miniature painting journey.

Most often, you'll find yourself reaching for a Size 0 or Size 1 brush, though keep in mind that sizes can vary between brands. The key aspects to consider in a brush are the length of the bristles and the belly which denotes the paint-holding capacity. Optimal bristle length ensures flexibility and a bit of spring while painting. The belly is crucial for retaining enough moisture and paint, preventing the brush from drying out too quickly.

Many make the error of using a brush that's too small, leading to rapid drying of paint at the tip or the need for frequent reapplication. Using a slightly larger brush with a fine point can resolve this issue. The goal is to find brushes with a pointed tip for handling intricate details and targeting specific areas.



Artis Opus Series S

While Size 0 and Size 1 brushes are standard in the hobby, having a variety of brush sizes is essential for different tasks. This includes extremely small details like miniature eyes or larger details on bigger models. Brush sets typically offer a range of sizes, from Size 000 to Size 3, covering most painting needs in the hobby.

Dry-brushing is a technique that enables you to highlight your miniatures quickly and effectively which you can find more about [here](#). Typically, there are two types of dry brushes: the rounded dry brush and the flat dry brush. These two varieties behave differently, so having both in your toolkit is a good idea. When it comes to choosing a dry brush, in my opinion, there isn't much complexity. You can invest in premium options like [Artis Opus dry brushes](#), or you can opt for makeup brushes from your local cosmetics store, which often yield similar results at a lower cost. Additionally, it's worth noting that you should never discard old brushes that have reached the end of their life or that you've accidentally ruined, as these can often serve perfectly for dry brushing as well as other purposes!



Artis Opus Series D - Dry Brushes

When looking for brushes, you'll also find a variety of shapes and sizes designed for specific tasks like basing, weathering effects, stippling, applying pigment powders and more. Different artists have their preferences, so feel free to experiment and see what works best for you. It's all about trial and error, so give different brushes a try if you think they might suit a particular task.

Now, let's delve into the ongoing discussion of synthetic versus kolinsky brushes. Synthetic brushes, being man-made, are often more budget-friendly compared to their natural Kolinsky counterparts. They are highly recommended for beginners, providing an affordable option for those just starting out. This is especially beneficial as beginners may inadvertently damage brushes through improper use or cleaning.

On the other hand, kolinsky brushes, crafted from natural hair, boast qualities such as excellent paint retention and distribution, resilience, springiness and precise points for detailed work. The natural tapering of kolinsky hair facilitates smooth and even brushstrokes.

While many artists swear by the superior characteristics of Kolinsky brushes, it's crucial to note that the market has its share of poorly made ones. So, resist the temptation to grab the first seemingly bargain-priced kolinsky brush you come across.

Comparatively, synthetic brushes can be acquired at a relatively low cost around £4-5 each. In contrast, quality Kolinsky brushes may range upwards of £15 each. It's advisable to consider investing in Kolinsky brushes once you've honed your skills and mastered proper brush care, as they are a pricier but rewarding choice.

You can find quality synthetic brushes at nearly any hobby store, so I won't get into specific brand recommendations. However, be cautious with super cheap synthetic brushes as they might lack durability.

When it comes to Kolinsky brushes, several reputable brands stand out, including Artis Opus, Da Vinci, Windsor & Newton, Rosemary and Co, and Raphael. If you're thinking of adding a Kolinsky brush to your collection, [Rosemary and Co's Series 33 brushes](#), priced around £7 each, are a good starting point with positive reviews in the hobby community. Alternatively, if you're feeling indulgent, you could go all-in with a complete Artis Opus set. There isn't a single standout brand or brush that outshine the rest; it ultimately boils down to personal preference for most artists. New companies are constantly emerging, each bringing their unique flair to the hobby. Take [Chroniclerpgs](#), for instance; they also offer affordable kolinsky brushes. It's a good idea to stay on the lookout and occasionally explore new suppliers.



Now that you've got your brushes, taking care of them properly is key to extending their lifespan. While no paintbrush is invincible, there are simple steps you can take to make them last longer. The first and most crucial consideration is the specific use of each brush. You can significantly prolong their life by assigning dedicated brushes for specific tasks. For instance, have separate brushes for contrast paints, washes and metallic paints since different paints react differently with the brush bristles. Also, match the right brush to the right job – save your expensive detail brushes for intricate work and use larger, more economical brushes for broader strokes such as base coating.

A basic but important rule during painting is never leaving your brushes upside down in the water pot, even for a short time. This can easily damage and misshape your brushes. Always use cold water in your pots; hot water can loosen the glue holding the bristles in place. The tips of paintbrushes are delicate and should never be forcefully pushed onto any surface.

When using metallic paints, dedicate a specific synthetic brush to avoid damaging the natural hair of brushes like Kolinsky. Similarly, use a separate water pot for cleaning metallic paint brushes to prevent contamination.

Avoid using your highest quality brushes for contrast paints and washes, as these paints tend to travel further up the brush and into the ferrule. This can cause the bristles to splay, leading to a loss of the fine tip. If the paint is allowed to dry, this can be very difficult to remove - avoiding paint in the ferrule is good practice when using any paint.

During and after painting, ensure that paint doesn't dry within your brush. Rinse your brush regularly during painting, reload it with paint and change the water in your pots to prevent paint buildup. After painting, rinse and clean your brushes promptly before the paint has a chance to dry.



After finishing painting and rinsing your brushes in water, use a brush soap and conditioner like [The Masters Brush Cleaner & Preserver](#). This product, widely used in the hobby, significantly extends the life of your brushes. Simply add water to your brush and use a circular motion on the soap to create a lather that cleans any remaining paint from the bristles. Repeat until no more pigment is visible. Additionally, a small amount of conditioner on the brush tip can reshape it into a fine point, ensuring your brushes remain in top condition.

The Masters Brush Cleaner

HOW TO CUT FROM THE SPRUE

What this section covers:

- Cutting from the sprue using nippers
 - Cutting from the sprue using a craft knife
-

Removing miniature models from sprues is a crucial step in the assembly process. This guide aims to provide you with a detailed and comprehensive set of instructions on how to effectively and safely remove miniature models from their sprues. Following these steps will help ensure that your models are cleanly separated without causing damage or stress to the model, allowing for a smoother and more enjoyable assembly process.

Step 1: Choosing Your Tools

The only tools you need at this stage are sprue cutters and/or a craft knife. If you are only using budget sprue cutters, that is totally fine, you just need make sure that you are being extra careful when the time comes to cut the pieces away from the sprue. If you also have access to a more expensive, precise pair of sprue cutters, you are still going to make use of your budget cutters in this guide so be sure to have them to hand.



Redgrass Gaming Precision Nippers

Step 2: Set Up Your Workspace

Pick a workspace that's well-lit – seeing clearly is key at this stage. If you've got one, throw down a cutting mat to keep your table or workspace in tip-top shape

Step 3: Inspect the Sprue

Start by checking that all the pieces of your model are present at this stage. If not, you can pack it back up in brand-new condition and get a replacement. Assuming everything is intact, give the sprue a close look to pinpoint which miniature parts you'll be taking off. Keep an eye out for any delicate or detailed bits that might need some extra care when you start cutting.

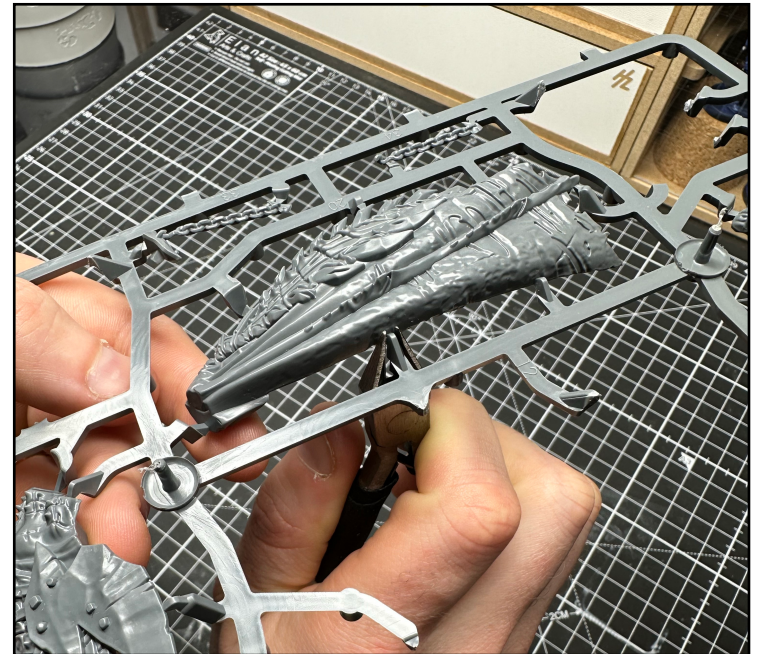
Step 4: Remove Excess Sprue (Optional)

Now, if you've got both the budget and the more expensive precision sprue cutters we talked about earlier, here's where you bring in the budget ones. Use them to snip away the excess sprue around the model. This trims it down, making your life easier when you aim for that

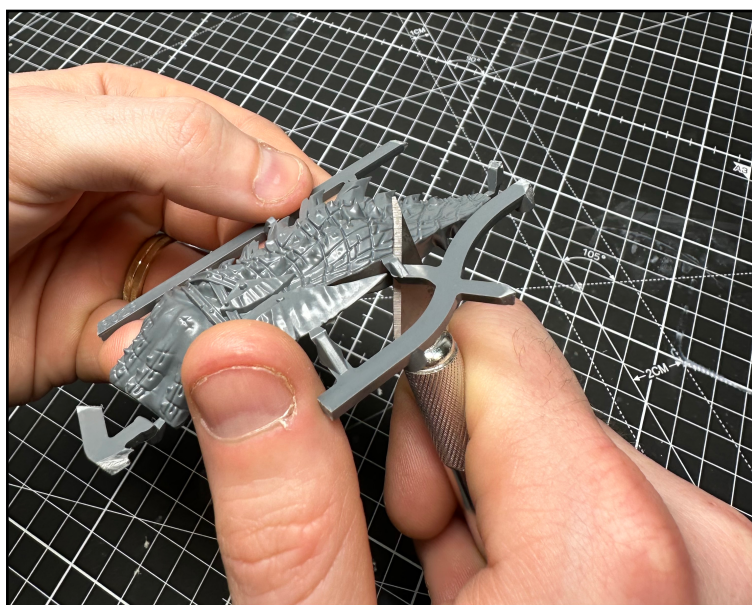
super precise cut in the next step. This chunkier sprue can wear out your sprue cutters pretty fast which is why we suggest sticking to your budget cutters for this part if you have the luxury of owning both pairs.

Step 5: Making The Cut (Sprue Cutters)

Grab your most accurate tool and position the sprue cutters parallel to the part you want to detach from the sprue. Make sure the flat side of the cutters is snug against the piece you're removing – this lessens the strain on the material and gives you a neater cut. Once you're confident your tool is right at the model's connection point, go for a smooth and precise cut with a single squeeze of the cutters.



Try to keep flush to the model



Take care when using a craft knife

Step 5: Making The Cut (Craft Knife)

Opting for a precision cut with a craft knife is what some people believe to be the cleanest separation of a model from the sprue. To use this method start by using budget-friendly sprue cutters to eliminate most of the excess material, leaving only a small remaining connection. Then, with utmost care and safety in mind, position the blade at the attachment point's base, where the miniature meets the sprue. Execute a straight cut with a pulling motion, steering clear of pushing the blade towards the miniature to prevent any accidental slips.

Step 6: Final Inspection

Once you've taken off the part, give it a thorough check for any lingering imperfections. If you spot any, grab your cutters or knife and trim away any leftover material, sticking to the same methods we talked about earlier. The model is never going to be entirely perfect at this stage, however, that's something we can take care of when it comes to cleaning up our models ready for assembly.

By following these detailed steps, you can effectively remove your miniatures from their sprues with precision and care. Patience and attention to detail are key throughout this process to achieve clean cuts and maintain the integrity of your models.

HOW TO REMOVE MOULD LINES

Mould lines on miniature models are raised or indented seams that result from the casting process during manufacturing. When miniature models are produced using moulds, two halves of the mould come together to form the complete model. The meeting point of these mould halves creates a seam and this seam is what is referred to as a mould line.



You might observe imperfections on certain surfaces of your model. These can result from casting blemishes or leftover material when you removed the model from its sprue, creating noticeable flaws. It's crucial to address these imperfections for two main reasons. Firstly, if they're on the miniature's surface, they'll be noticeable once the painting is done. Secondly, if they're on the edges where one piece is glued to another, removing this excess material is essential to guarantee a tight and seamless fit during assembly.

There are several methods commonly used to remove mould lines and imperfections from miniature models and hobbyists often choose the method that suits their preferences and the specific needs of the miniature. In this case, no single tool is universally ideal for every task. Your choice of tool depends on factors like the shape and size of the model, as well as the specific outcome you're aiming for on the miniature's surface. Different tools are selected to suit the unique requirements of each situation.

Below, we'll delve into the tools you might use and provide guidance on how they are used in different scenarios.

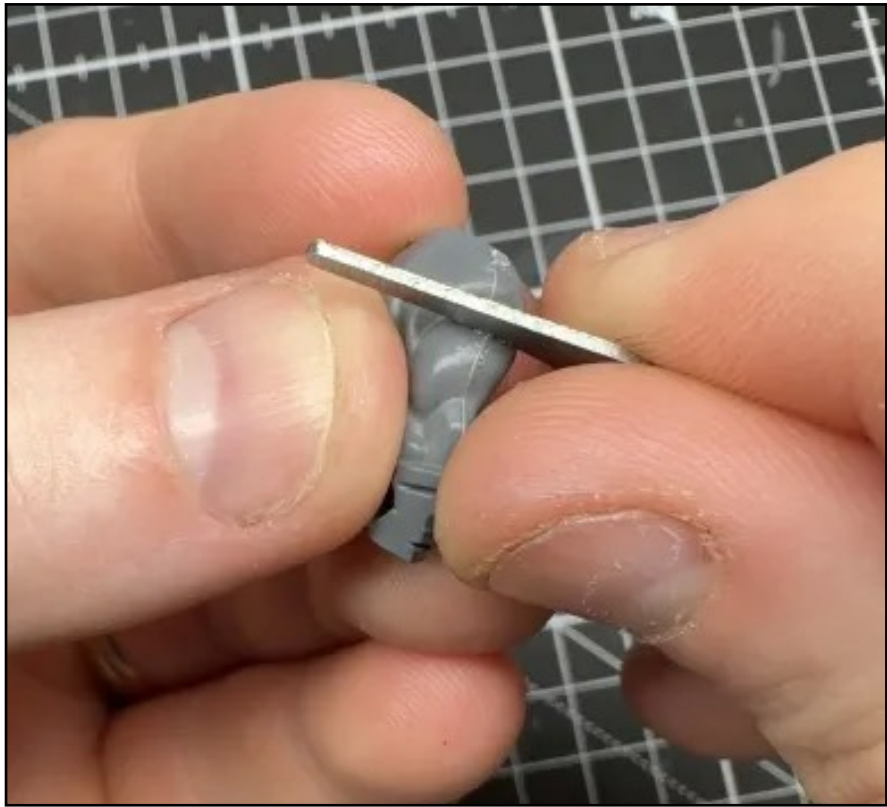
Removing Mould Lines with a Craft Knife or Mould Line Remover

A mould line remover or craft knife can be used for the removal of unwanted mould lines from miniature models. Choosing between tools is a matter of personal preference and each has its own advantages and drawbacks. While a craft knife isn't explicitly designed solely for removing mould lines, some individuals appreciate its efficiency, especially due to the precision offered by a sharper blade.

Step 1: Identify the Mould Lines

Carefully examine the miniature to identify any raised lines or seams caused by the casting process. These are the areas you'll be addressing with the mould line remover tool.





Step 2: Choose the Right Tool

Mould line removers and craft knives often come with different blade shapes and sizes. Select a blade that is suitable for the contours of the mould line you're addressing.

Step 3: Position Your Tool

Place the edge of your chosen tool against the unwanted line or seam. Hold it at a slight angle to the surface of the miniature with the blade positioned to gently scrape along the mould line.

Step 4: Removing the Mould Line

With controlled and even pressure, scrape along the surface of the model. The blade should remove the excess material without causing damage to the surrounding details. Check your progress periodically. Repeat the process until the mould line is entirely removed and the surface is smooth.

Step 5: Clean the Miniature

After removing the mould lines, use a soft brush to clean the miniature of any remaining debris, ensuring you are left with a pristine surface for painting.

The mould line often remains visible after this process, but it's not a concern as long as you can no longer feel it. Simply run your finger across the surface, and - if it feels smooth - your job is complete. Any lingering visual mould line will vanish once you prime the miniature.

Removing Imperfections from Flat or Rounded Surfaces

Regardless of your careful precision in removing miniatures from the sprue, there's often a bit of excess material or a surface imperfection left behind. Whether it's on a flat or rounded surface, the process is quite similar, but different tools are often preferred. For flat surfaces, a sanding stick or file is typically more effective. In contrast, for rounded surfaces, a sanding pad excels in conforming to the curves and contours and can normally be cut into smaller pieces for those harder to reach areas.



Step 1: Examine the Model

Inspect the miniature after removing it from the sprue. Identify any imperfections or rough spots left from the sprue attachment points.

Step 2: Choose the Right Tool

For flat surfaces, opt for a sanding stick or file. If you're working on a rounded surface, reach for your sanding pad. Always go for a fine grit—it guarantees a smooth finish without removing excess material.

Step 3: Begin Sanding (Sanding Stick or File)

Hold the flat sanding stick or file against the surface of the model where the imperfection remains. Gently sand the imperfections in one direction applying even pressure. Check your progress frequently to avoid over-sanding and removing too much material.

Step 3: Begin Sanding (Sanding Pad)

Hold the pad against the rounded surface and apply even pressure. Move the tool in circular or back-and-forth motions to smooth out the irregularities. Sanding rounded surfaces requires patience. Work in small, controlled movements, checking your progress frequently to avoid over-sanding. The goal is to achieve a smooth finish without altering the model's shape.

Step 4: Clean the Miniature

After removing the mould lines, use a cheap, soft brush to clean the miniature of any remaining debris to ensure you are left with a pristine surface for painting.

The details provided above offer a general guide on addressing imperfection and you'll likely use various tools of different shapes and sizes based on the specific surface and details you're working on. Additionally, you might choose to refine your miniatures further by using a finer sanding grit, achieving an even smoother surface. Remembering to regularly clean your tools is essential in preventing the buildup of material residue. Keeping your tools clean ensures more effective and precise sanding.

Now that your miniature is tidy and set for assembly, perform a dry fit test by placing the pieces together. Ensure they fit snugly before gluing. If you spot any sections not aligning as perfectly as they should, take this opportunity for a bit more of a cleanup to correct it before progressing to the next stage.



HOW TO ASSEMBLE YOUR MINIATURES

What this section covers:

- Assembling and gluing
 - Pinning your miniatures
 - Drilling gun barrels
-

The process of assembling your miniatures with glue remains generally consistent regardless of the material, making it a familiar routine each time. However, the choice of glue can vary based on the materials involved. Before we learn how, let's take a look at the specific glues suitable for different materials.

First on our list is poly cement (or plastic glue) aptly named for its compatibility with plastic. This glue operates by melting the plastic, creating a robust weld between the two pieces when it dries. Tamiya Extra Thin Cement, a widely used and recommended product in the hobby is known for its effectiveness in forming a strong bond. Most people's first experience of plastic glue is Games Workshop's own brand glue, and whilst this is absolutely fine I would recommend trying Tamiya.



The second adhesive is super glue. Known for its quick bonding properties, super glue is versatile and adheres well to various surfaces including resin and metal miniatures. With numerous brands available, it's often an economical choice. It's essential to mention that, especially with resin, washing the miniatures before gluing is crucial to eliminate any residual lubrication from the cast-moulding process.

What is a sub-assembly?

In miniature painting, sub-assembly involves painting or assembling smaller components separately before combining them to form the complete figure. This technique offers benefits such as improved access to intricate details and ease of handling smaller pieces. It can enhance workflow efficiency and help avoid paint damage which can occur when handling and painting a fully assembled model. Common sub-assemblies include the body, head, arms and weapons, which are painted individually and then assembled to create the final miniature. Overall, utilising sub-assemblies in miniature painting enhances detail accessibility,

paint control and overall efficiency. If your goal is to swiftly paint a tabletop army of miniatures, sub-assembly might not be your ideal choice. However, if you're aiming for the highest-quality paint job, sub-assembling your miniatures is undoubtedly the recommended approach.

Assembling Your Miniatures

Now, let's move on to assembling your miniatures. In essence, the methods for assembling plastic miniatures are quite similar to those for metal or resin figures. You'll find the details in the guide below.

Step 1: Prepare Your Workspace

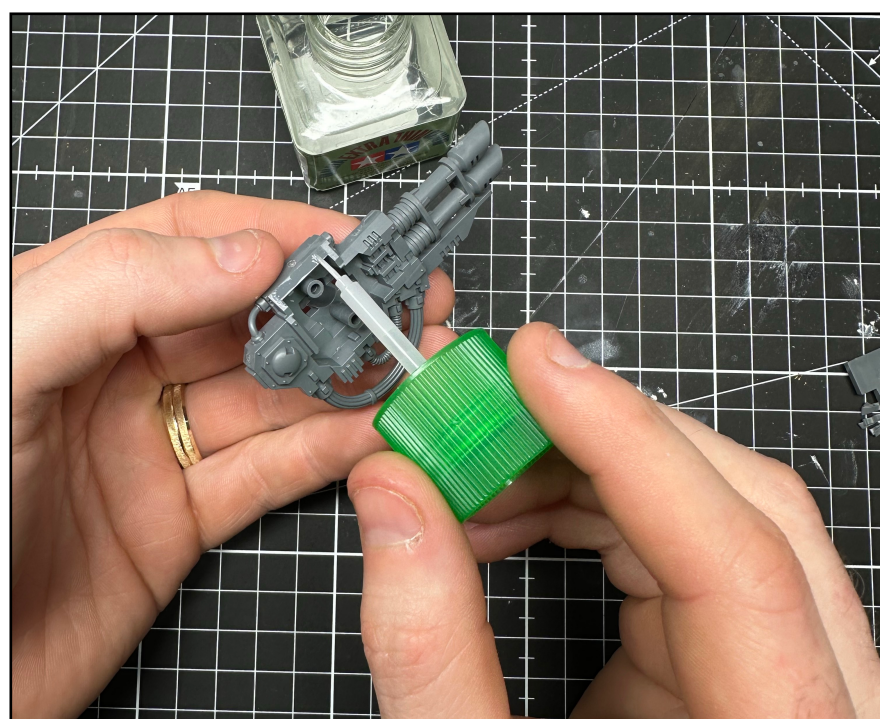
Ensure you're working in a well-ventilated area. Lay down paper towels or have cotton swabs on hand for any potential spills. If desired, wear disposable gloves to protect your hands.

Step 2: Review Dry Fit

Double-check that you have properly dry-fitted the miniature pieces to ensure they align correctly. This step is crucial before applying the glue.

Step 3: (Plastic Cement) Apply the Plastic Cement

Apply a small amount of plastic cement to one of the surfaces you're joining. A thin layer is usually sufficient.



Step 3: (Super Glue) Apply the Super Glue

Apply a small amount of super glue to one of the surfaces you're joining. Super glue is potent, so a little goes a long way.

Step 4: Press The Pieces Together

Immediately press the pieces together firmly. Ensure a snug fit, aligning them according to your dry fit test. Hold the pieces together for a short duration; this allows both types of glue to bond the two pieces together.

Step 5: Wipe off Excess

When utilising Tamiya Extra Thin Cement for your plastic miniatures, you'll observe its remarkably thin consistency. Interestingly, any excess that emerges between the bonded parts tends to contribute to a less noticeable seam on the miniature. The good news is that there's usually no need to wipe away this excess.

On the other hand, super glue has a thicker consistency. Any extra glue that oozes out from the joint should be carefully wiped away for the best results.

Step 6: Allow Time to Dry

After gluing, let your miniatures sit in a well-ventilated, open area for an adequate drying period. Most glue brands provide a recommended bonding time, and it's crucial to adhere to this guideline for a secure and durable bond.

Pinning

Pinning refers to a technique used during assembly to create a more robust and secure connection between parts - especially when dealing with larger or heavier components. The process involves inserting a small metal pin, often made of brass or steel, into corresponding holes drilled in the parts being joined. This pin serves as a reinforcement, providing additional strength to the bond between the pieces.

The pinning technique is especially valuable in situations where the miniature model may experience stress, weight or handling, as it reinforces the assembly and helps prevent parts from breaking or coming apart. While pinning adds an extra step to the assembly process, it contributes to the overall durability and longevity of the finished miniature.

You can find a basic guide on how to pin your miniatures below:

Step 1: Identify Components

Identify the larger or weight-bearing components of your miniature model that may benefit from additional reinforcement.

Step 2: Plan Pin Locations

Determine where the holes for the pins will be placed. Aim for areas that won't compromise the aesthetics of the model.

Step 3: Drill Holes

Using a small hobby drill with a matching drill bit, carefully drill a hole into one piece of the miniature.

Step 4: Prepare Metal Pins

Cut small sections of metal pins, ensuring they are slightly longer than the depth of the drilled hole.

Step 5: Insert Metal Pins

Insert a metal pin into the drilled hole, allowing it to extend slightly beyond the surface and use super glue to secure the pin in place.

Tip: An easy way to ensure that the holes align is by drilling one piece of the miniature first and glueing the pin in place. Once dry, add a small dot of paint on to the end of the pin and line the two pieces up. Drilling where the paint appears on the second piece allows you to line both pieces up perfectly.

Step 6: Join Components

Bring the components together ensuring the metal pin fits snugly into the corresponding hole in the other piece. Apply super glue to the contact surfaces for a secure bond. Hold the two pieces together for a short period of time to allow the glue to form a bond.

Step 7: Allow Time To Dry

After gluing, let your miniatures sit in a well-ventilated, open area for an adequate drying period. Most glue brands provide a recommended bonding time and it's crucial to adhere to this guideline for a secure and durable bond.

Drilling Gun Barrels



Drilling gun barrels on miniatures is a widespread practice among hobbyists for various reasons. It enhances realism by mimicking actual firearm barrels and contributes to a more authentic representation. Models with drilled gun barrels achieve a finished look, adding aesthetic appeal. Additionally, drilled barrels enhance the visual impact of models in photography, creating more dynamic and lifelike shots.

Step 1: Mark the Centre

Identify the centre point on the gun barrel where you want to drill the hole. Make a small mark using a fine-tip marker or pencil.

Step 2: Prep with Hobby Knife

Use the hobby knife to carefully create a small indentation at the marked centre. Apply gentle pressure and rotate the knife tip to create a pilot hole. This small hole ensures the drill bit follows the centre of the barrel and your hole will remain central during drilling.

Step 3: Set Up the Drill

Insert the drill bit into your hobby drill and secure it in place. Make sure the drill bit you've selected is the right size for the job. It's crucial to avoid leaving the plastic on the barrel too thin after the drilling process.



Take your time getting this central



Step 4: Start Drilling

Begin drilling slowly and steadily. The pilot hole created by the hobby knife helps guide the drill bit. Apply gentle pressure, allowing the drill bit to penetrate the barrel. Continue drilling until you reach the desired depth for the hole. Be cautious not to drill too deep or apply excessive pressure, especially with delicate gun barrels.

Once you've reached the desired depth, slowly withdraw the drill bit. This helps prevent any breakage or damage to the gun barrel.

Step 5: Clean The Hole

Use a small brush or compressed air to clean out any debris from the drilled hole. Ensure it's free of any residue that might affect the appearance. If desired, use a fine-grit sanding pad or hobby file to smooth the edges of the drilled hole, creating a clean and polished finish.

HOW TO FILL GAPS & SEAMS

Seam lines refer to the visible lines or gaps that occur when two or more parts of the model are joined together. These lines are typically the result of the manufacturing process where individual components of a miniature model are moulded separately and then assembled. The seam lines can be more noticeable on models with intricate details and smooth surfaces.

Hobbyists often aim to eliminate or minimise these lines to achieve a more realistic and seamless appearance for their finished models. The goal is to create a model that appears cohesive and realistic without the distraction of visible seams. The specific approach to addressing seam lines may vary depending on the type of model, the materials used and the surface in which the seam appears.



Credit: [edpaintsstuff](#)

Several techniques employ various methods and materials and the choice usually comes down to personal preference. I'll cover several options and I recommend experimenting with each to discover what works best for you.



Sprue Goo

"Sprue goo" refers to a slurry like liquid that is created using a technique where melted plastic sprue (which is the excess plastic from model kits) is used as a filler or adhesive. The excess sprue is cut down and added to the plastic cement which melts down into a 'goo'-like consistency. This melted plastic is applied to seams, gaps or imperfections in a model to fill them in creating a smoother surface.

Sprue goo is a cost-effective and efficient way to deal with imperfections in model kits and it allows you to use the same type of plastic as the model itself for filling gaps.

It's a DIY approach that some artists find useful for achieving a cleaner and more polished look in their finished models.

Once the sprue goo has dried and hardened, you are able to sand and finish the surface to achieve a seamless and smooth appearance.

This video by Vince Venturella demonstrates how to create and correctly use Sprue Goo. He applies the slurry to a seam on one of his models, showing a quick and easy solution for filling the areas where two pieces come together, followed by sanding and priming of the model to show how the seam line has disappeared.



Milliput

Milliput is a two-part epoxy putty used in modelling and miniature work. Comprising equal parts, typically referred to as Part A and Part B, Milliput - when combined - forms a durable and hard substance upon complete curing. It is commonly employed to fill seams and gaps on miniatures due to: its versatility in shaping and sculpting; strong adhesion to various materials, resulting in durability; suitability for sanding and finishing to achieve a smooth surface; and compatibility with painting processes.

Using Milliput can enhance the overall appearance of miniatures by creating seamless and well-finished surfaces, making it a valuable tool for hobbyists and modellers.



Milliput Superfine White

Trovarion has created an excellent video aimed at beginners although still very useful for anyone who has never worked with Milliput. In the video, he showcases the necessary equipment and guides viewers through the process of working with Milliput to fill the gaps and seam lines on a Space Marine.



In another insightful video, Marco Frison demonstrates the art of working with Milliput. Beyond the basics, Marco adeptly guides you through filling larger gaps and shares a clever trick mixing Milliput with alcohol. This technique results in a creamy texture that seamlessly adheres to the miniature's contours, especially handy for addressing extremely small seam lines.



Vallejo Plastic Putty

Plastic Putty is a product crafted by Vallejo, a reputable manufacturer in the miniature industry. Tailored specifically for plastic models, this putty serves the purpose of filling gaps, seams and imperfections.

With a solvent-based composition, it is applied to model surfaces using tools like spatulas or brushes. Once applied, Vallejo Plastic Putty undergoes an air-drying and curing process, solidifying into a durable substance.

While Vallejo Plastic Putty dries promptly, a nifty trick is to employ a damp brush or tool to manipulate and finesse the putty while it's still wet. This technique allows for a more controlled and smoother finish once it dries. It's important to keep in mind that this particular putty is not the ideal choice for larger gaps, as it tends to exhibit a slight shrinkage during the drying process.

Vallejo's instructional video offers a precise guide on the proper application of their plastic putty. It demonstrates the correct usage for filling gaps, achieving seamless blends that complement the model's contours, and attaining a polished finish on flat surfaces.



Greenstuff

Green Stuff, also known as Kneadatite, is a two-part epoxy putty commonly employed in miniature modelling and sculpting. Comprising a blue and a yellow component, when kneaded together, it undergoes a chemical reaction and transforms into a malleable green material.

Adhering well to various surfaces such as plastic, metal and resin, Green Stuff is favoured for its versatility in sculpting intricate details, adding texture and filling gaps or seams on miniatures. After a curing period of a few hours, it solidifies into a durable state with a degree of flexibility.



Credit: [edpaintsstuff](#)

While there might be more optimal options for achieving a perfect finish on a smooth surface, green stuff excels at filling seam lines and gaps on textured surfaces like fur. Its pliability allows you to work with the putty, replicating the texture and moulding it to seamlessly blend the two pieces of the miniature, making it an excellent choice for such applications. It can also be mixed with milliput, to retain the desirable properties of both putties, gaining more flexibility when compared to milliput alone, but more rigidity once cured than green stuff.

Additionally, its paintability allows modellers to seamlessly integrate sculpted additions into the overall aesthetic of their miniatures. A widely used material in the miniature community, Green Stuff proves valuable for customising and enhancing miniature creations.

In this demonstration by Adam from The Army Painter, he effortlessly showcases the simplicity of working with green stuff. He illustrates its effectiveness in concealing seam lines and addressing minor imperfections on miniatures through the process of gap filling.



Plastic Cement

Plastic cement engages in a method called solvent welding. Applied to plastic surfaces, it contains a solvent, like acetone, that interacts with the plastic, momentarily softening or dissolving it to form a pliable layer. When these softened surfaces are pressed together, the molecules mix, establishing a strong bond.

In instances where a miniature already fits together seamlessly with minimal seam lines, using plastic cement can eliminate these lines entirely. By fusing the two miniature pieces together, it achieves a flawless finish on the surface.

In the initial segments of Sword 'n' Steele's video, she illustrates the application of plastic cement to effectively eliminate seam lines from the miniature she is constructing.



UV Resin

UV resin is a liquid polymer that cures or hardens when exposed to ultraviolet (UV) light. I recently found this reel created by [Spencer Stone](#) where he used UV resin to fill seams and gaps. This material serves as a versatile solution due to its unique properties.

The resin is applied to seams and gaps in miniature models, where it fills and conforms to the desired shape. Once in place, exposure to UV light initiates the curing process, transforming the liquid resin into a solid and durable substance. This creates a seamless and cohesive surface effectively concealing imperfections.

The key advantages of UV resin include its quick curing time allowing for a rapid transformation from liquid to solid with the application of UV light. Once dry it can also be sanded down for a cleaner finish, however, it is extremely important when doing this to wear a respirator and eye protection as you do not want to inhale any of the resin dust or get any in your eyes.



PRIMING YOUR MINIATURES AND ZENITHAL HIGHLIGHTING

Priming your miniatures is a crucial step in the painting process as it provides a base coat for the subsequent layers of paint to adhere to. Here are some step-by-step guides on how to prime your miniatures:

Priming your miniatures using a rattle-can

Priming miniatures with a rattle-can is a popular choice among painters due to several advantages. It provides even coverage with a fine mist, ensuring a smooth and consistent base coat for uniform paint adhesion. The method is quick and efficient, particularly for large projects. Spray primers are user-friendly, affordable, easily accessible, and available in various colours. The process is time-efficient and, when used correctly, spray primers preserve intricate details on miniatures.

Step 1: Choose the Right Primer:

Select a primer suitable for your miniatures and the type of paint you plan to use. Common colours are black, white or grey. Black is often used for dark colour schemes, white for bright colour schemes, and grey for a neutral middle ground. You can also find primers in a variety of colours allowing you to choose the one that fits your preferences. For instance, if you're painting a significant number of Ultramarines, you might opt for a blue primer. This choice helps reduce the amount of paint needed for the initial layers, making the painting process more efficient.

Step 2: Prepare Your Workspace:

If you're using spray primer from a can, chances are you'll be doing it outdoors where there's good ventilation. In that case, secure your miniatures by attaching them to a piece of cardboard or a long wooden board using some sticky tac. Consider wearing a mask for protection and gloves to keep your hands clean. Make sure to shield any nearby areas you don't want to accidentally overspray. It is worth noting that when priming with a rattle can it is beneficial for the can to be at room temperature. When priming outside ensure that it is not raining and that the weather is not extremely hot or cold as this can affect the paint adhesion.



Step 3: Prepare Your Miniatures:

Ensure your miniatures are clean and free from dust or debris. If necessary, wash them with mild soap and water and allow them to dry completely.



Step 4: Optional Masking:

If you want to protect specific areas from primer, use masking tape or putty to cover them.

Step 5: Shake the Primer:

Shake the can thoroughly according to the manufacturer's instructions. This ensures the primer is well-mixed, providing a smooth and even coat and allows consistent coverage.

Step 6: Apply the Primer:

Hold the spray can about 6-12 inches away from the miniatures. Apply the primer in short, controlled bursts, moving the can in a sweeping motion to cover all angles. Be sure to rotate the miniatures to reach all sides.

Step 8: Check for Uniform Coverage:

After a few minutes, inspect the miniatures for any areas that may need additional primer and touch up any spots you may have missed.



Step 7: Allow to Dry:

Let the primer dry completely before moving on to the painting stage. This usually takes a couple of hours, but check the specific drying time recommended by the manufacturer.

Priming Your Miniatures Using an Airbrush

Priming miniatures with an airbrush provides painters with enhanced control and precision, offering numerous advantages. Airbrushes allow for precise application, ensuring even coverage and targeted detailing for a consistent base coat. Their ability to preserve fine details results in a more professional finish; the fine mist they produce contributes to a smooth and even primer coat establishing a solid foundation for subsequent paint layers. While airbrushing presents numerous benefits, it's crucial to acknowledge airbrushing comes at a much greater cost than priming with spray cans and a potential learning curve as well as prioritising proper maintenance for consistent and reliable performance. You can find a more in depth look at airbrushes and how to use them in our guide [here](#).



Spray booth vented out of the window

Step 1: Choose the Right Primer:

Select a primer that is specifically designed for airbrushing. Ensure it's compatible with the type of miniatures you are working with and the paint you plan to use. Common colours are black, white or grey, however, you are also able to pick up airbrush primer in a huge variety of colours. As mentioned in the previous guide for spray cans, if you were priming a large group of Ultramarines, it could be a wise choice to choose a blue airbrush primer.

Step 2: Prepare Your Workspace:

Set up your airbrush and compressor in a well-ventilated area - ideally you will be using a dedicated spray booth. Wear a respirator mask to protect yourself from inhaling primer particles. Consider using gloves to keep your hands clean. If you are not using a spray booth, make sure to shield any nearby areas that you don't want to accidentally overspray.

Step 3: Prepare Your Miniatures:

Ensure your miniatures are clean and free from dust or debris. If needed, wash them with mild soap and water and allow them to dry completely.

Step 4: Optional Masking:

If you want to protect specific areas from primer, use masking tape or putty to cover them.

Step 5: Thin the Primer (if necessary):

Some airbrush primers may need thinning for optimal performance. Follow the manufacturer's instructions and use an appropriate thinner if required. Achieve a consistency that allows smooth spraying without clogging the airbrush.

Step 6: Set Airbrush Parameters:

Adjust the airbrush settings such as air pressure and paint flow to achieve a fine mist. Test on a scrap surface to ensure the desired consistency.

Step 7: Apply the Primer:

Hold the airbrush about 6-12 inches away from the miniatures. Begin spraying in a sweeping motion, ensuring even coverage. Rotate the miniatures to cover all angles. Apply multiple thin coats rather than a single heavy coat to avoid obscuring details. Allow the primer to dry between coats

Step 8: Check for Uniform Coverage:

After a few minutes, inspect the miniatures for any areas that may need additional primer. Touch up any missed spots with additional coats as needed.

Step 9: Allow to Dry:

Let the primer dry completely before moving on to the painting stage. This usually takes a couple of hours, but check the specific drying time recommended by the manufacturer.

Zenithal Priming

Zenithal priming is a miniature painting technique involving the application of multiple layers of primer in varying shades to simulate realistic lighting effects on the model. The approach aims to replicate how light interacts with three-dimensional objects, emphasising bright areas where light directly hits and shadows in less illuminated regions. This method enhances detail visibility, making shadows and highlights more pronounced, facilitating a simplified painting process. Mimicking natural lighting, zenithal priming adds depth and dimension to miniatures, making them visually appealing and distinctive on the tabletop. The pre-shaded miniature serves as a guide for highlighting and shading during the subsequent painting stages.

Below you will find a short step by step guide to Zenithal Priming in three stages using black, grey and white.

Step 1: Prepare Your Workspace:

Set up a well-ventilated area such as outside unless you are using a dedicated spray booth for priming. Ensure that the miniatures are clean and free from dust or debris. If needed, wash them with mild soap and water, and allow them to dry completely.

Step 2: Base Coat with Black Primer:

Start by applying a base coat of black primer to your miniatures. Spray from about 6-12 inches away and cover the entire surface evenly. Allow the black primer to dry completely.





Step 3: Apply Grey Primer from a 45-Degree Angle:

Hold the miniatures at a 45-degree angle, allowing the grey primer to hit the upper surfaces. This creates a mid-tone between the black and white primers. Apply the grey primer sparingly to achieve a subtle transition. Allow it to dry.

Step 4: Apply White Primer from Above:

Position the spray can or airbrush directly above the miniature and apply a light coat of white primer. This should hit the raised surfaces and areas where light would naturally hit. Keep the white primer layer thin to maintain the subtlety of the shading. Allow it to dry completely.



TYPES OF PAINT

Paints – where to begin? With shelves filled with options, it's easy to feel a bit lost at first glance. But fear not as there's no one-size-fits-all rule when it comes to paint type and brand. Artists tend to develop their own preferences based on personal experiences and needs. It's common to find yourself with a variety of paints from different brands, each with its own strengths and weaknesses.

Below, we'll explore some of the most popular paints in the hobby, offering explanations to help you understand their differences and why they're used.



Acrylic Paints

Acrylic paints are widely used in miniature painting for several reasons including their versatility, ease of use, quick drying time and compatibility with various surfaces commonly found on miniature models.

Acrylic paints come in a vast array of colours and finishes ranging from matte to glossy. This versatility allows painters to achieve a wide range of effects from realistic textures to fantastical colour schemes.

These paints are (mostly) water-based making them easy to thin and clean up with water. This makes them ideal for beginners and experienced painters alike as they are forgiving and allow for experimentation without the need for harsh solvents or specialised equipment. Acrylic paints can also be easily mixed to create custom colours and shades, allowing

painters to match specific colour schemes or create unique effects. They have a relatively fast drying time compared to other types of paints like oils or enamels. This quick drying time enables painters to work efficiently, applying multiple layers or colours without having to wait extended periods between coats.

Acrylic paints adhere well to a variety of surfaces commonly found in miniature modelling including plastic, metal, resin and even textured surfaces like foam or cork. This ensures that the paint bonds securely to the model, reducing the risk of chipping or flaking over time.

They can be combined with various mediums and additives to achieve different effects. For example, acrylic mediums can be used to extend drying time, increase transparency or create textured surfaces. Additionally, acrylic paints can be used in conjunction with inks, washes or dry pigments to enhance details and add depth to miniature models.

Acrylic paints are generally considered to be safer and less toxic than other types of paints like oils or enamels. They have lower odour levels and are less likely to cause skin irritation or respiratory issues making them a preferred choice for indoor painting environments.

The video by Zumikito compares different paint brands to determine which is the best, concluding that while there are differences in finish and working characteristics, ultimately ,the brand does not matter as much as the painter's skill and figuring out how to make that paint work is the best way for the job at hand.



Oil Paints

Oil paints consist of pigments suspended in oil - traditionally linseed oil. They have been used by artists for centuries and are known for their rich colours, slow drying time and ability to blend smoothly.

One of the primary advantages of oil paints is their extended drying time. Unlike acrylics, which dry quickly, oil paints remain workable for a longer period, allowing for more intricate blending and layering techniques. This slow drying time enables painters to achieve smooth transitions between colours and create subtle gradations of light and shadow.



Oil paints are highly pigmented resulting in vibrant colours with excellent coverage. This opacity allows for strong colour saturation and depth, achieving rich textures and intricate details. Once dry, oil paints form a durable and flexible layer that adheres well to miniature surfaces, providing long-lasting protection and resistance to chipping or fading over time.

Another common use of oil paints are washes. Oil washes involve thinning oil paints to create a semi-transparent mixture that is then applied to the surface of a miniature. The wash flows into the recessed areas (such as crevices, panel lines and textures) enhancing the shadows and creating contrast with the raised surfaces. This technique is particularly effective for adding depth and definition to intricate details, such as armour plates, clothing folds and mechanical components.

Marco Frisoni has this video which is an ultimate beginner's guide to using oil paints. Covering various brands, solvents, techniques and tools, the video provides step-by-step instructions and tips for blending colours and creating different effects with oil paints. It also emphasises the versatility and potential of oil paints for miniature painting.



Contrast Paints

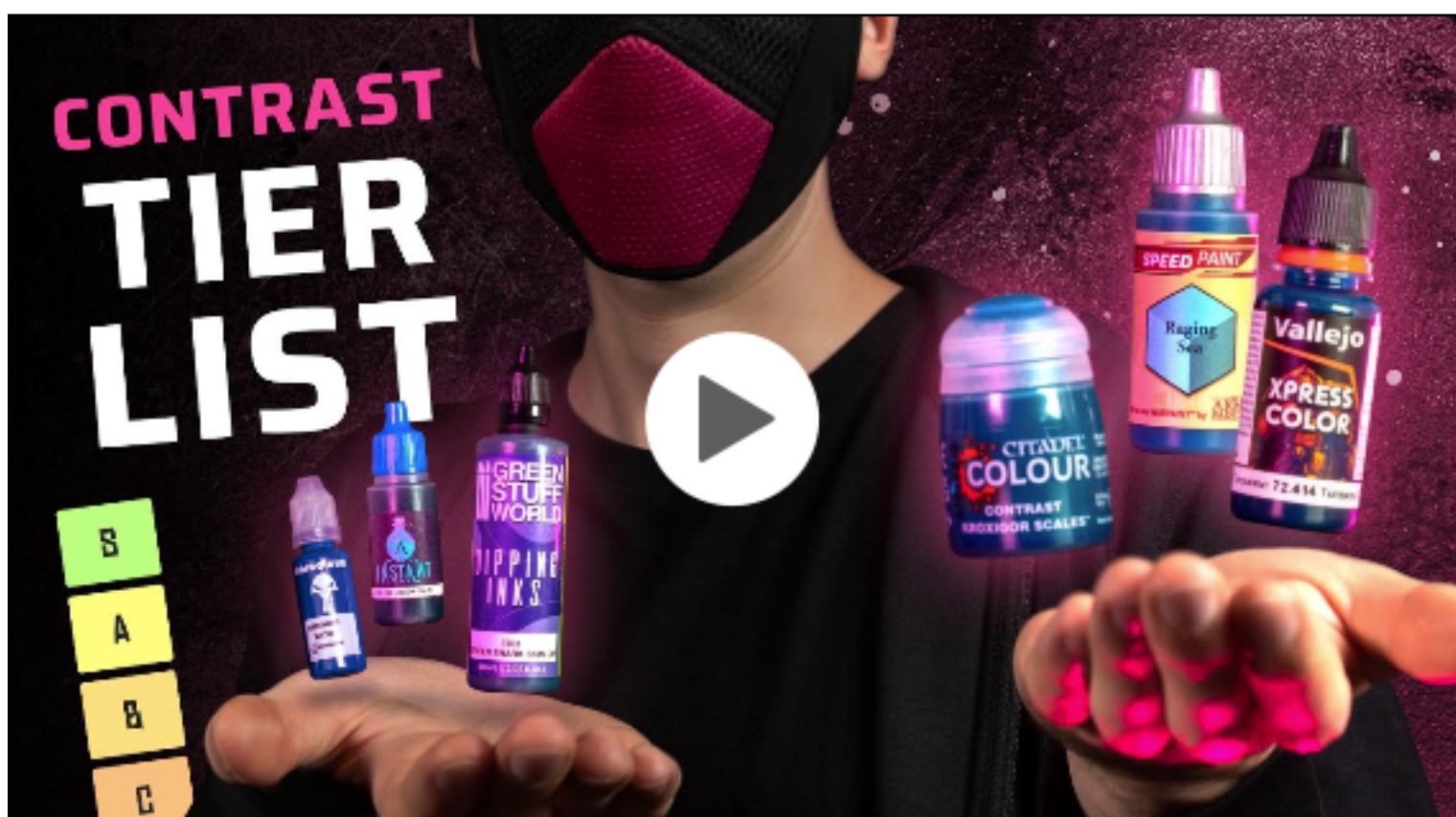
Contrast paints are a type of acrylic paint developed specifically for miniature painting. They are formulated to provide high contrast and strong shading with a single application, making them particularly useful for painting large numbers of miniatures quickly.

Contrast paints have a unique consistency that is thicker than traditional washes but thinner than standard acrylic paints. They contain a high pigment concentration and a flow improver, which allows the paint to flow smoothly into recessed areas while leaving a translucent layer on raised surfaces. This results in automatic shading and highlighting creating depth and definition with minimal effort.

They're beginner-friendly, requiring minimal mixing, and offer consistent results catering to hobbyists of all skill levels. Formulated for high contrast, they enhance intricate textures and details while their versatility allows for customisation when combined with traditional acrylic paints. With predictable viscosity and drying time, they're perfect for batch painting ensuring uniformity and efficiency.

While "Contrast" is Games Workshop's branded name for this type of paint, many other paint manufacturers offer similar products under different names.

This video by Stahly ranks and reviews various one coat paint brands highlighting their advantages and disadvantages including: Games Workshop's Contrast, Scale 75's Instant Colors, Warcolors antithesis, Army Painter's Speedpaint, Green Stuff World's Dipping Inks, and Vallejo's Express Colors.





Enamel Paints

Enamel paints consist of pigments suspended in a solvent-based medium (typically mineral spirits or turpentine) with a drying oil (such as linseed oil) added as a binder. Once applied to a surface, the solvent evaporates, leaving behind a durable and glossy finish that is resistant to moisture and wear. They also have a longer drying time compared to acrylics, allowing painters more time to work and manipulate the paint on the model.

Enamel paints are commonly used for weathering and detailing miniature models such as adding rust, grime, oil stains or chipped paint effects. Their durability and finish make them well-suited for creating realistic weathering effects that enhance the overall appearance and narrative of the model.

Washes

A wash refers to a thinned-down paint mixture applied over a model's surface to add shading, depth and definition to its details. Washes are typically made by diluting paint with water or a specialised medium to achieve a translucent consistency. They are then applied to the miniature where they flow into the recessed areas such as crevices, folds and panel lines, creating shadows and accents.

Washes help to define intricate details on the miniature such as fabric folds, facial features or surface imperfections, enhancing the overall visual appeal and realism of the model.

Another important function of washes is colour blending. They can be used to seamlessly merge different hues across various sections of the model or to imbue the entire colour scheme with a subtle tint.

Additionally, washes are commonly utilised for weathering effects such as simulating rust, grime or dirt.



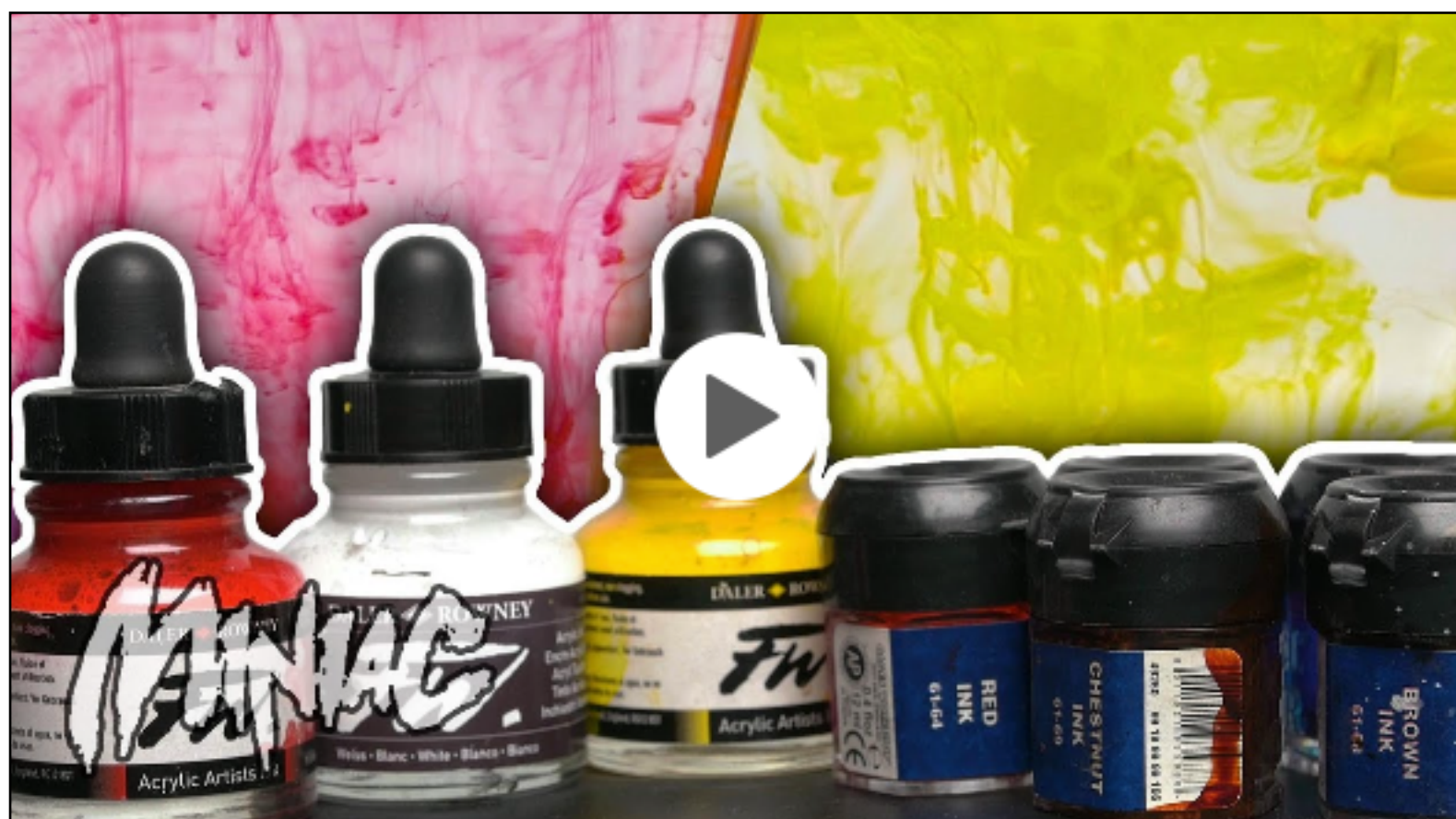


Inks

Acrylic inks are a type of highly pigmented liquid paint commonly used to achieve vibrant colours, enhance details, and create special effects. They are formulated from acrylic polymer emulsions, resulting in a fluid consistency similar to watercolour paints.

Inks are excellent for airbrushing as they create a smooth base for effects like Object-Source Lighting (OSL). They're also highly effective for zenithal priming, providing a great foundation for highlighting.

In this video, the Miniac explores everything we need to know about inks and their uses in painting miniatures. He explains how they offer intense colour saturation without obscuring the underlying texture, making them great for tinting, glazing or highlighting. They also have high flow and can be mixed with other hobby products making them versatile for various painting techniques.



Brands

There's no single standout brand in the miniature painting world; it all boils down to personal preference as mentioned before. However, below you'll find a list of some of the most popular brands frequently used in the hobby:

- AK Interactive
- Vallejo
- Two Thin Coates by Duncan Rhodes
- The Army Painter
- Citadel by Games Workshop
- Scale 75
- Reaper Miniatures
- Ammo by Mig
- Warcolors
- Pro Acryl
- Formula P3
- Tamiya

HOW TO USE A WET PALETTE

A wet palette is a tool commonly used in miniature painting to keep acrylic paint workable for longer periods of time. It consists of a shallow container with a lid, a sponge or absorbent material, and a sheet of parchment or greaseproof paper placed on top of the sponge.

The sponge is soaked with water and then excess water is squeezed out so that it's damp but not dripping wet. The parchment paper is then laid on top of the sponge, creating a surface where acrylic paints can be placed and mixed.

The wet palette works by keeping the paints moist and preventing them from drying out too quickly, which is especially important during long painting sessions or when working in dry or hot environments. The moisture from the sponge beneath the parchment paper helps to maintain the consistency of the paint, allowing painters to blend colours smoothly and work with finer details without the paint drying out on their brush.



Credit: img.miniatures



Overall, a wet palette is a valuable tool for miniature painters, helping to extend the working time of acrylic paints and improving the overall painting experience and providing many benefits. While a wet palette is straightforward, there are right and wrong ways to use it. Knowing the dos and don'ts ensures it works well and you get the most out of it.

Vince Venturella delivers this comprehensive guide to wet palettes explaining what they are, how to set them up and how to use them effectively for painting miniatures. He discusses the different types of wet palettes, the importance of keeping the sponge saturated and tips for preventing mould. Throughout this video, various techniques and methods for using the wet palette are demonstrated.



In this video by Lyla Mev, you'll also learn how to set up and effectively use a wet palette. Additionally, Lyla shares valuable tips, tricks and solutions to common issues encountered with wet palettes such as paint drying too quickly, becoming too watery, or experiencing paint separation. Furthermore, she provides guidance on how to maintain the cleanliness of your palette for optimal performance.



HOW AND WHY TO THIN YOUR PAINTS

When beginners paint their miniatures, a common error is using undiluted paint directly from the pot. The favoured method is to apply several thin coats with two being a recommended starting point for beginners. However, it's essential to note that different colours have varying levels of coverage and the colour of the primer used can influence the outcome.



Acrylic paints are a top choice for painting models and miniatures due to their high quality and versatility. However, these paints often come in a thick form which may not always result in a clean finish on your project. Thinning acrylic paints is a simple technique to achieve a smoother and more controlled outcome.

There are various options to choose from and we'll cover the most popular and effective ways to thin your acrylic paint.

Firstly, there's water - an age-old choice for thinning acrylic paints. It's effective, readily available and more budget-friendly than other options. Mixing water into your paint can help achieve a smooth and consistent texture and colour. However, be cautious not to add too much water.



Thinning medium is another option, allowing you to thin acrylic paints by spreading out the pigment. The thinner the medium, the more the pigment is diluted. Using these products in smaller amounts ensures easier application without compromising the colours. Thinner mediums come in various types, but I recommend those in dropper bottles for convenience.

People often opt for a thinning medium over water because it provides a generally consistent mixture. Water, on the other hand, can vary in quality and hardness. Thinner mediums come down to your preference offering more consistency and predictability than water.

Flow improvers enhance the consistency of acrylic paint allowing for more efficient and smooth application. Their primary role is to thin the paint without compromising colour strength, maintaining your desired finish. Flow improvers reduce the viscosity of the paint, achieving similar thinning results and providing a flatter, more finished look.

These various ways to thin your paint lead to favourable outcomes for your models and miniatures. Now that you know your options, let's discuss why thinning is crucial.

Thick acrylic paint tends to accumulate around the details of your project, filling cracks and recesses with excess paint. This creates a messier look compared to the refined appearance achieved with thinned paint.

Thinning your paint eliminates variations in thickness and texture that can result in visible brush strokes on your models. Visible brush strokes detract from a refined finish. Paint thinning eradicates these differences in texture, providing a smooth and flat finish.

With thinner paint, you can make more precise brush strokes and achieve attractive results in detailed work. This is especially important with miniatures where details matter, particularly in small and precise spaces.



Credit: [jmg.miniatures](https://www.jmgminiatures.com/)

Thinning your acrylic paint is a simple process that becomes second nature with practice. Experimenting with small amounts of paint is the key to achieving your desired results. It's not only easy but significantly improves the outcome for your models and miniatures. These subtle changes in paint thickness elevate the quality and appearance of your work. Over time, you'll discover the consistency needed for the task at hand through practice and experience.

Now that you know what you need for thinning paints and understand the benefits, I highly recommend checking out the videos below for a more comprehensive guide on how to thin your paints. Both of these linked videos are exceptionally informative and watching them will provide you with a much clearer visual understanding of the thinning process compared to reading a step-by-step guide on how to do it.

This video by Brushstroke Painting Guides is a step-by-step guide on how to thin paints to achieve a smooth finish by adding water and controlling the consistency, allowing the paint to flow and settle on the model. Thinning affects coverage and drying time and multiple thin coats are needed for a solid finish. Brush control and light touch are also important for smooth application and all of this information is meticulously explained in this video:



Zumikito Miniatures provides a guide on how to thin paints for miniature painting depending on desired finishes and techniques, including the use of washes, dry brushing, glazes and standard layers. They demonstrate the amount of water or solvent added to determine the transparency and control of the paint, with tips provided for achieving different effects. It is one of the most comprehensive and useful videos that I have watched on paint thinning.



BRUSH CONTROL

Brush control is crucial in miniature painting as it significantly impacts the overall quality and precision of the finished piece. Whether it's base coating, glazing, feathering, edge highlighting or other techniques, mastering them requires an understanding of brush movement, paint consistency and maintaining a steady grip on the brush.

Maintaining a proper grip on the brush is fundamental to executing intricate techniques. A steady grip provides stability and control, preventing unintentional smudges or uneven application. The artist's connection to the brush is critical in translating their vision onto the miniature.



Effective brush movement is essential for achieving smooth and controlled strokes, especially when working on intricate details. Skilful brush handling allows artists to navigate the miniature's surface with precision, ensuring that each stroke contributes to the desired effect.

Paint consistency plays a pivotal role in achieving desired outcomes. Controlling the thickness and flow of the paint is essential for creating smooth transitions, vibrant colours and nuanced shading. Consistent paint application relies on the artist's ability to manipulate the brush and paint in harmony.



I discovered that the most effective way to grasp brush control isn't just by mimicking a pro painting a miniature. Instead, it's more helpful to watch videos where the artist explains their actions, the reasons behind them, and guides you on how to do it on your own.

In the end, while you might understand the various aspects of brush control, the real key to improvement lies in practice. Practising builds muscle memory and helps us master the art of controlling the brush and paint until it becomes like second nature.

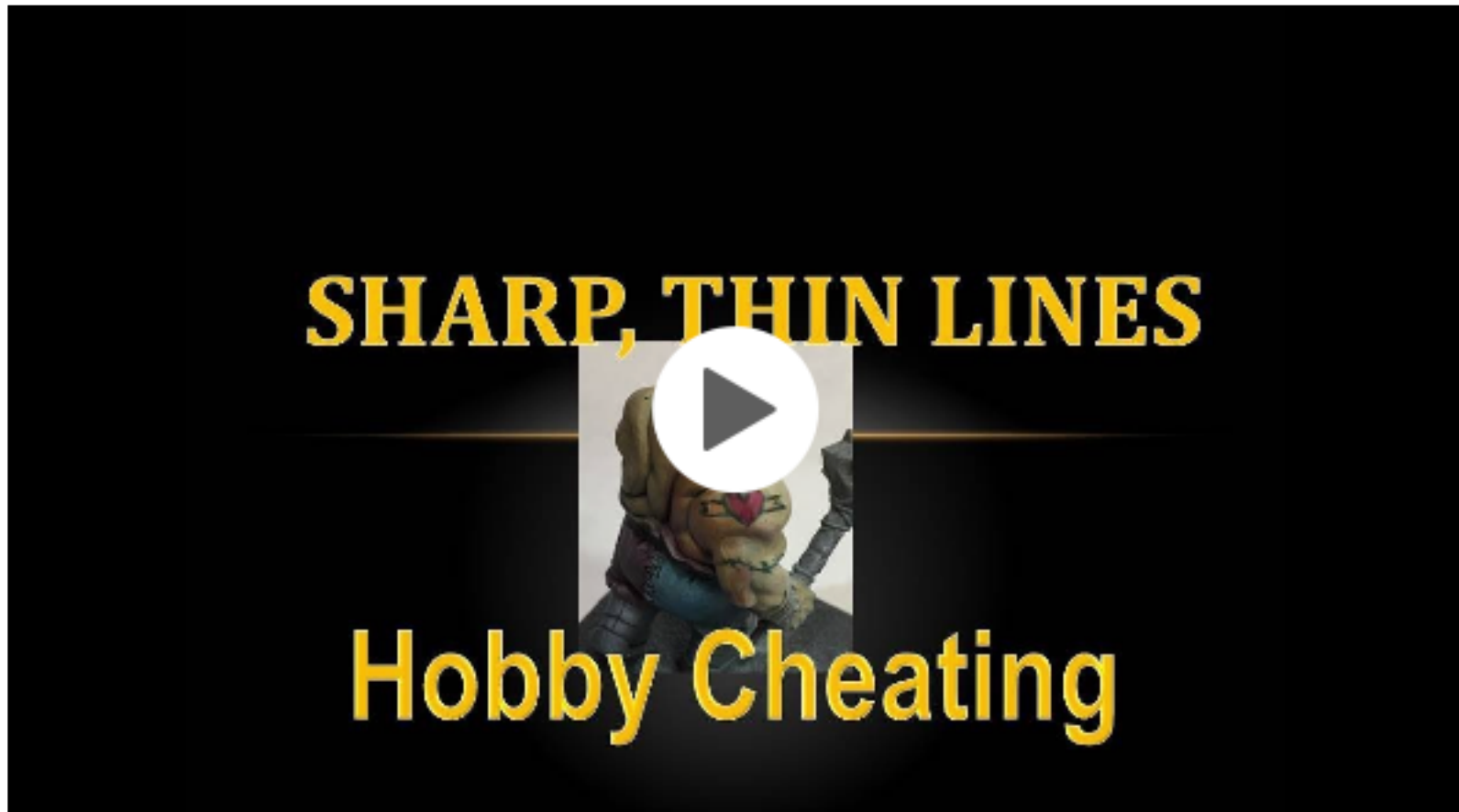
This video by Warth of Minis discusses the importance of brush control including stable painting positions and the effects of brush placement and removal. It emphasises the need for practice and understanding paint consistency in order to effectively control the brush and achieve desired effects. It is a great video to start with to build your brush control knowledge.



Vince Venturella discusses brush control in this video and how it directly affects techniques such as base coating, glazing, feathering and edge highlighting. Vince explains the importance of brush movement, paint consistency and grip on the brush and teaches us how to do these correctly and efficiently.



In another video by Vince Venturella, he shares tricks for painting precise, thin lines. He suggests using flow aid to loosen up the surface tension of acrylic paint, resulting in a controlled flow. These techniques are versatile and can be used for various tasks from tattoos and textures to tiny details such as eyes.



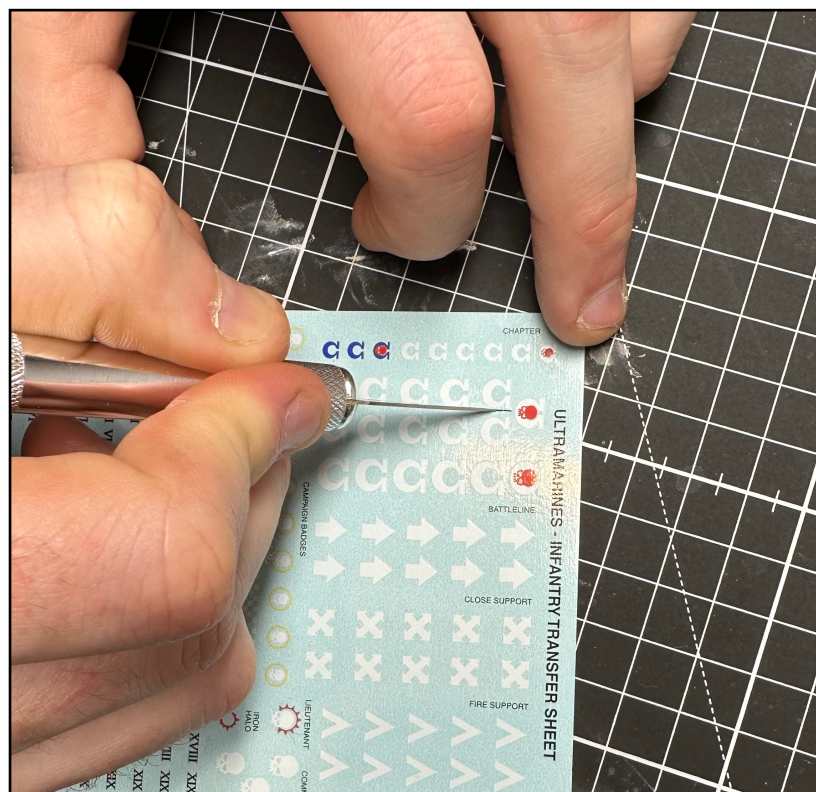
HOW TO APPLY TRANSFERS

Transfers are akin to decals or stickers featuring intricate designs, symbols or insignias. They serve as a means for hobbyists to adorn their miniatures with unique markings or details. This technique allows enthusiasts to infuse their miniatures with personalised custom designs, including heraldry and various visual elements. Transfers are regularly employed to incorporate faction-specific symbols, unit markings or other decorative elements onto the miniature models, contributing to a visually distinct representation of the piece.

The process of applying transfers is straightforward and only requires a bit of time. Here's a simple step-by-step guide for adding transfers to your miniatures. Before you start, make sure you have these items ready: a paint brush, water, gloss varnish, matte varnish, Micro Set and Q-tips.

Step 1: Commence by preparing the miniature's surface. Ensure a smooth and solid foundation for the transfer by applying a coat of gloss varnish.

Step 2: When working with a sizeable transfer sheet, start by delicately cutting out the specific transfers you wish to use. Managing individual cut-outs is more convenient than dealing with a large sheet. For application on curved surfaces, consider making small cuts at the edges to enhance the transfer's fit.



Step 3: The transfers are on a backing paper and require lifting using water. Place them on kitchen paper, brushing both sides with water until the backing paper is thoroughly soaked. After a few minutes you should be able to slide the transfer on the backing paper using a wet brush.

Step 4: Lift the transfer off the backing paper with a wet brush and carefully position it on the model. Utilising a wet brush provides extra time to finesse the transfer into

a satisfactory position.

Step 5: After placement, inspect the transfer for flatness against the surface, checking for any visible imperfections. Apply Micro Set over the top of the transfer with a brush. This solution softens the transfer, aiding it in conforming to the surface. While Micro Sol can be used, exercise caution, as it is less forgiving and may thin the transfer too much if misused. Multiple coats of Micro Set may be necessary for stubborn areas.

Step 6: Post-application, if bubbles or minor imperfections persist beneath the transfer, utilise a damp Q-tip in a rolling motion to smooth them out.

Step 7: Conclude the process by painting the surface with matte varnish, eliminating the glossy appearance to match the rest of the model. Several coats may be required to fully mask the gloss varnish from the initial step.

Following this method will allow you to seamlessly apply transfers, achieving a result that closely resembles a printed or painted finish on the model.

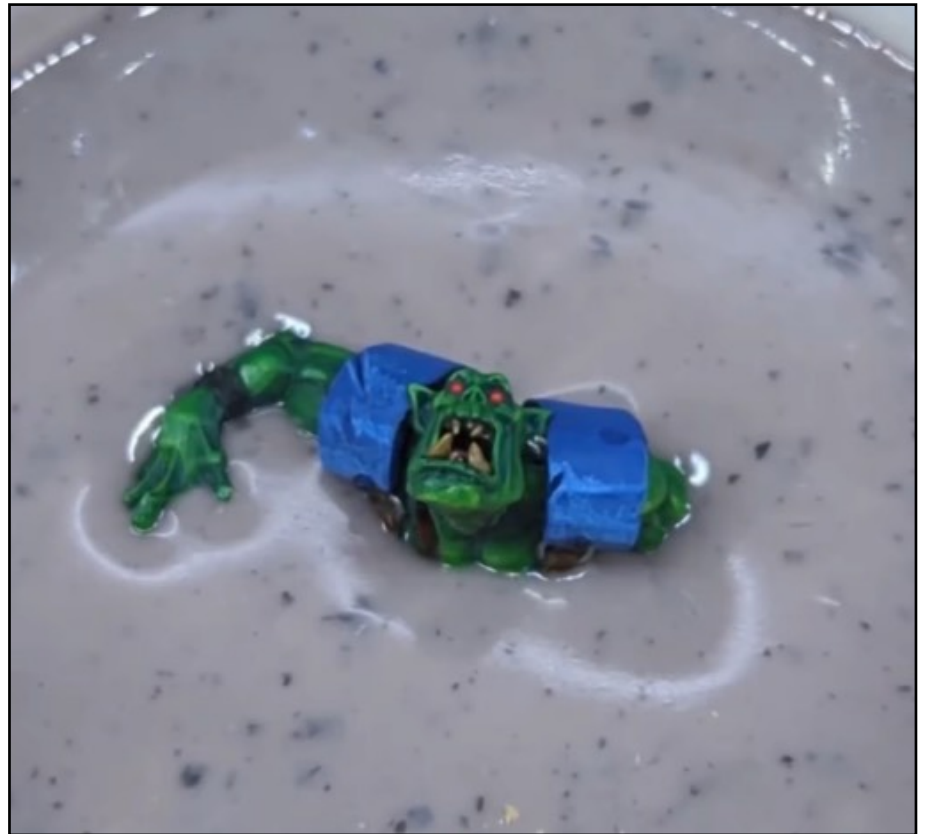
The below video by TableTopReady is a perfect visual example of the above guide and is what I used as a foundation for applying transfers to my miniatures:



HOW TO STRIP PAINT FROM MINIATURES

Stripping miniatures of paint is a process employed to remove existing paint layers from a model; it is often used when you wish to start anew or acquires a pre-painted model with an undesirable paint job. The process involves submerging the miniature in a stripping solution, commonly a paint remover or solvent, for a specified duration.

To begin, you must select an appropriate stripping agent. Common choices include commercial paint removers or household items like acetone or isopropyl alcohol. Safety precautions, such as wearing gloves and working in a well-ventilated area, are essential.



For the purpose of this guide, we'll be using Green Stuff World's Paint Remover as it's widely accessible worldwide and excels in removing paint from plastic, resin and metal miniatures. It usually comes in a 240ml bottle and can be re-used after the paint is stripped and the miniature has been removed. If you decide to use acetone instead, be cautious as this can damage some plastics.

Stripping miniatures is a straightforward process, and here's a simple step-by-step guide to assist you in this task.

Step 1: Begin by placing your miniature into a compact plastic tub with a lid or, alternatively, use a plastic zip-lock bag to minimise product usage by expelling air. The aim is to enclose the miniature, preventing the paint remover from evaporating.

Step 2: Pour the paint remover into the tub or bag until it completely covers the miniature and then seal the container. Green Stuff World recommends leaving the miniature in the liquid for 1-6 hours, but adhere to the directions of your chosen paint stripper. Some products may start working earlier than indicated, so check on your miniature after a short period.

Step 3: After the recommended waiting time, take your miniature out of the paint remover and employ a toothbrush to gently remove any remaining paint. Paint typically detaches more easily from resin or metal miniatures compared to plastic ones. For plastic miniatures, you might need to brush and then return them to the paint remover for a second round to eliminate any lingering paint. Following this process, your miniature should be stripped back to its original material.

Step 4: Wash your miniature using soapy water to eliminate any lingering paint stripper. Rinse it with clean water and allow it to fully dry before starting to paint it again.

Step 5: Since Green Stuff World's paint remover is reusable, pass it through a filter to remove paint flakes present in the liquid. Save the filtered paint remover for future use on another miniature. This adds to the cost-effectiveness and sustainability of the product.

This video by Mediocre Hobbies is a great visual representation of the guide mentioned above. I'm sure different artists have preferred products for removing paint and some would give a different answer than this, however, this video was one of the first I came across and it explains exactly what is required.



BASING YOUR MINIATURES

Basing your miniatures can range from quick tabletop jobs to meticulously crafted bases often seen in competition entries.

Adding bases to miniatures not only enhances their visual appeal but also helps establish the scene or atmosphere. For instance, using terrain elements like rocks and sand can elevate the overall theme and make the miniature more captivating.

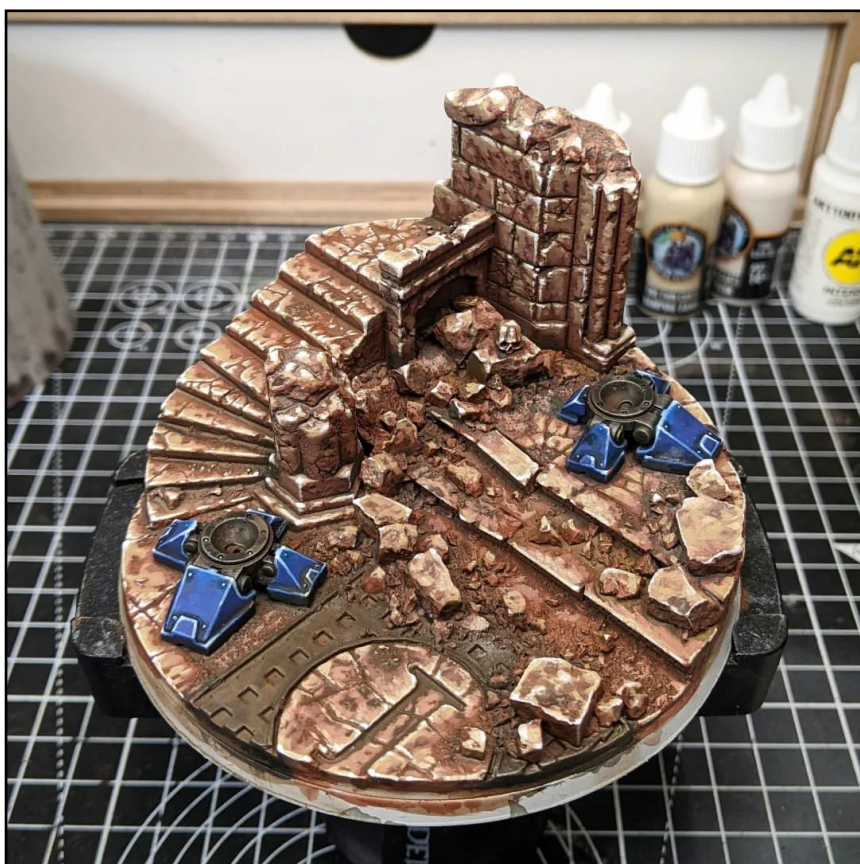
Moreover, the base of a miniature tells a story and provides context for the scene it's set in. A base adorned with ruins or debris can imply a larger narrative, especially when used across multiple miniatures within an army.



Credit: [Mud Creek Miniatures](#)

Hobbyists seize the opportunity to personalise their miniatures through base customisation. Experimenting with various materials, textures and techniques allows them to create unique bases that reflect their style and preferences.

Bases also serve as an additional canvas for showcasing modelling and painting skills. Meticulously detailed bases showcase craftsmanship and attention to detail, adding a layer of realism by grounding the miniatures in a specific environment. This might include adding grass, dirt, sand or water effects to mimic real-world landscapes.



[↑ Contents](#)

Credit: [Stibio Primaris](#)

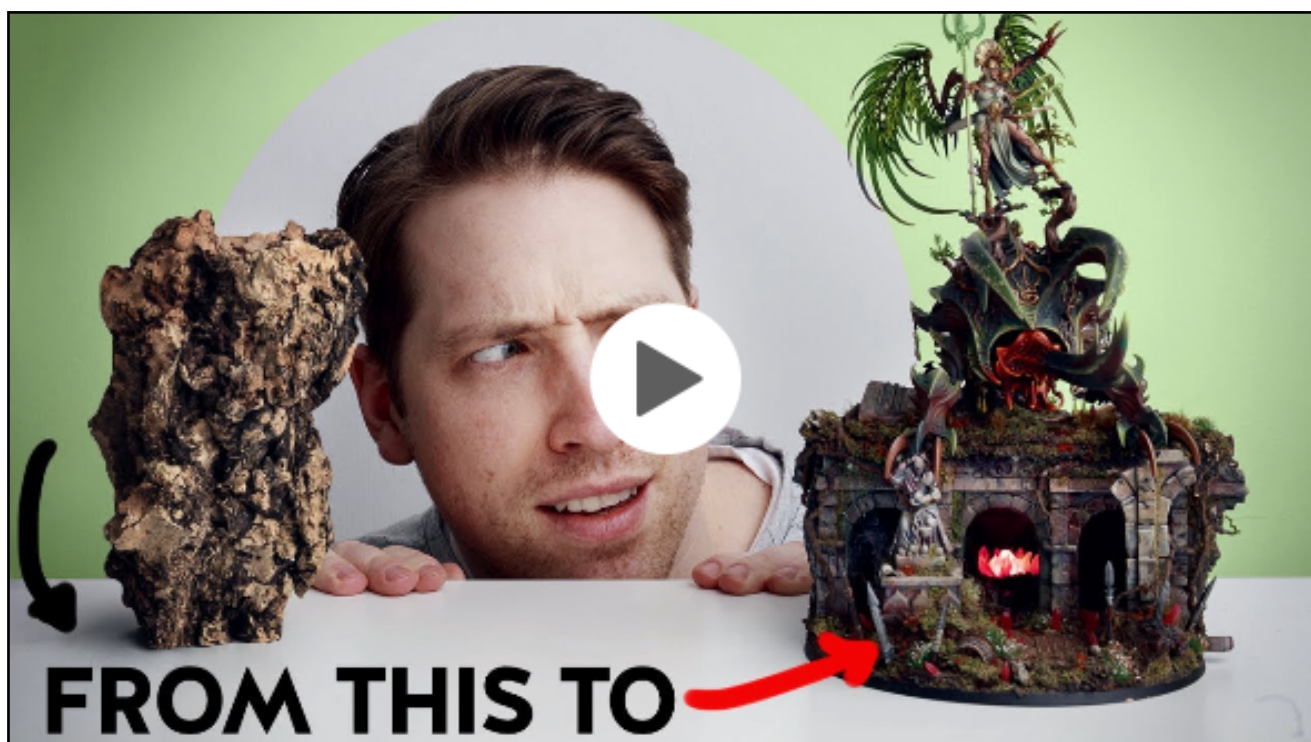
Whether spending just a few minutes or investing significant time, both the miniature and its base contribute equally to creating a visually stunning piece of art.

Below, you'll find a variety of videos that cover the basics of basing miniatures in simple ways as well as more intricate designs.

Geek Gaming Scenics presents a fantastic solution for quick yet impactful basing for your tabletop miniatures. Their video demonstrates simple techniques that yield impressive results. With a wide selection of sands and gravels, Geek Gaming Scenics caters to various tabletop themes, ensuring that hobbyists can find the perfect match for their projects



In their video, Squidmar Miniatures explores a wide array of materials and techniques for crafting miniature bases. From cork and roots to coffee stirrers, sand, grass tufts and beyond, they provide a comprehensive overview of possibilities. While they don't delve deeply into creating specific bases, their exploration offers a lot of inspiration which can be used on your own miniatures.



This lengthy tutorial by Artis Opus provides beginner-friendly start to finish instructions on how to create basic and advanced bases for miniatures using simple materials and techniques. The video covers techniques like applying sand and slate with PVA glue, dry brushing for texture and adding tufts for vegetation, resulting in visually appealing bases.



In this video tutorial, Squidmar Miniatures shows step-by-step how to create a detailed display base for Orruk Warclans using various techniques and materials such as 3D printing, plastic card, cork, coconut fibre, wooden planks, pigments and water texture. The process involves creating realistic textures for the rocks, wood and water, as well as adding foliage and details like roots and moss. The end result is a highly detailed and visually striking base and the video gives you a great insight into the ideas and work that go into detailed display bases.



PAINTING STYLES

In the world of miniature painting there's a delightful array of painting styles, each giving the finished model a distinct look. Artists have their own preferences and techniques offering us a variety of interpretations for the same models in the hobby. This diversity inspires us to try new styles or incorporate elements into our own work.

Professional artists have crafted unique painting styles over the years making their work easily recognisable. Even with the same task, no two painters create exactly alike. Your preferences, experiences and chosen techniques shape a style that's uniquely yours. The painting style often becomes the deciding factor in why someone might prefer one miniature's paint job over another.

It's beneficial to identify the styles you're most comfortable with and enjoy painting the most. Recognising your tendencies allows you to consciously improve upon your style, understanding the desired end result and the techniques to achieve it. Knowing the elements of your current style helps you discover new aspects to blend in, adding another layer of uniqueness to your work as an artist.

When you begin painting miniatures, you might be drawn to replicate others' work or adopt their style, either by copying the paint job or following a tutorial. Over time, your own style naturally emerges, whether it's a personal take on a favourite artist's style or a completely unique expression. Ultimately, it's about embracing your abilities, acknowledging your limitations and creating something that brings you joy.

Let me share an awesome example with you – a friend that I've made within the hobby, [StibioPrimaris](#), who some of you might be familiar with. In his years of painting miniatures, I believe Stibio has crafted a unique painting style that I could spot from a mile away. If you take a close look, you'll notice bits and pieces inspired by various painting styles all merged into one and when all these elements come together, it forms something special and distinctly his own. I don't believe Stibio copies anyone; he's discovered his style and hones it with each miniature. The ones he painted in early 2021 and the ones he paints today both scream "Stibio Style", but the recent ones reveal much more refined work. They're a true testament to his gained skills and how far he's come. Stibio is a prime example of someone who found their style, stuck with it, and just keeps getting better.



Credit: [Stibio Primaris](#)



Credit: [Stibio Primaris](#)

Within the hobby of miniature painting, certain styles stand out as more recognisable and widely embraced. These styles, often more popular, become the go-to choices for many enthusiasts aiming to recreate them. Below, you'll discover a few of these prominent painting styles explained, along with helpful links to tutorials. These resources will guide you as you embark on your journey to paint in these styles or incorporate elements of them into your own creations.

'Eavy Metal

'Eavy Metal style painting refers to a specific painting style associated with the miniatures produced by Games Workshop. The term "Eavy Metal" originally referred to the team of skilled painters working for Games Workshop and, over time, it became synonymous with a distinctive high-quality painting style.

The 'Eavy Metal style is often distinguished by several key characteristics that collectively contribute to its unique and impactful aesthetic. Firstly, the style often employs high contrast between light and dark areas, creating a visually dynamic appearance that accentuates the intricate details of the miniatures.



Credit: [Mud Creek Miniatures](#)

Another hallmark of 'Eavy Metal painting is the skilful use of smooth colour blending. This technique involves gradual transitions between different colours resulting in a realistic and polished look on the miniatures. The commitment to fine detailing is evident in the style with miniatures featuring intricate elements such as fine lines and meticulous attention to small components, elevating the overall quality of the work.

The 'Eavy Metal painting style is specifically employed for Games Workshop box art. This style goes beyond realism, incorporating excessive detailing and edge highlighting techniques to accentuate the intricate features and volumes of a model. It's particularly effective for showcasing models on the box, ensuring that the details stand out and capture attention.

In addition to the meticulous painting of the miniatures, the presentation is enhanced by themed bases. Miniatures painted in 'Eavy Metal style are often showcased on bases that complement the overall look, incorporating realistic terrain or thematic elements that contribute to the narrative of the miniature.

Consistency is a crucial aspect of 'Eavy Metal painting, especially when applied to entire armies. Painters in this style ensure a cohesive and unified appearance across units, maintaining a standardised quality throughout the army.

Achieving high quality 'Eavy Metal paint jobs requires a high level of skill, practice and meticulous attention to detail. Many hobbyists aspire to replicate the 'Eavy Metal style and a plethora of tutorials and guides are available to assist painters in developing the techniques associated with this distinctive approach. Despite its inherent challenges, mastering 'Eavy Metal painting is a gratifying journey for those passionate about the miniature painting hobby.

Several artists, including former 'Eavy Metal painters from Games Workshop, share tutorials and tips and these resources are available to assist you in developing and enhancing your skills in this style.

Dave Perryman, also known as Infernal Brush on social media has an incredible video which provides a step-by-step guide on how to paint Ultramarines in the same style as the box art, with detailed instructions on shading, highlighting and adding final touches. Dave was a former 'Eavy Metal painter for Games Workshop and in this video he shares a number of expert tips which can be applied to any model being painted in the 'Eavy Metal style.



There is also an Infernal Brush discord community which have created the 'Eavy Archive - a completely free library of box-art recipes collected by the community and provided with the associated images to illustrate their usage and help you re-create box art schemes.

<https://eavy-archive.com/>

Grimdark

The "Grimdark" painting style in the Warhammer universe refers to a dark, gritty and often dystopian aesthetic commonly associated with the Warhammer 40,000 and Warhammer Age of Sigmar settings. This style often features weathered, battle-worn and heavily detailed miniatures with a focus on dramatic lighting and shadow effects to create a sense of grim and foreboding atmosphere.

One of the defining features of grimdark style is its utilisation of a muted and desaturated colour palette. Artists often intentionally avoid vibrant and lively colours, opting instead for a subdued range that contributes to an overall sense of darkness and gloominess. This deliberate choice in colour sets the tone for the grim and foreboding atmosphere that characterises the style.



Credit: [grimdark_gravis_guy](#)

A striking play of light and shadow is another hallmark of the Grimdark style. Artists skilfully employ high-contrast techniques using deep shadows and intense highlights to create a stark visual impact. This manipulation of light enhances the dramatic and ominous mood emphasising the harshness of the depicted world.

In addition to a muted palette and high contrast, Grimdark art often incorporates elements of weathering and distress. Artists employ various techniques, such as chipping, rusting and grime application to simulate the effects of time and harsh conditions on surfaces. This attention to weathering adds a layer of realism and contributes to the overall gritty appearance of the artwork.

Texture plays a crucial role in achieving the grimdark style. Artists meticulously detail surfaces, whether it be the worn leather of a character's armour or the rough texture of decaying structures. This focus on texture enhances the tactile and tangible feel of the depicted world, immersing the viewer in the gritty narrative.

Narrative storytelling is another prominent feature of Grimdark art. Scenes often depict a story of struggle, conflict or survival in a harsh and unforgiving environment.

Various techniques are employed by artists to achieve the Grimdark style. Layering, glazing and stippling techniques are used to build up colours gradually, creating smooth transitions

between light and shadow. Dry brushing is employed to bring out details in textures adding to the worn and weathered appearance. Oil washes are utilised for depth and shadow, particularly in recessed areas, while contrast paints with high pigment density help achieve strong colour contrast quickly. Weathering powders and pigments are also common tools simulating the accumulation of dirt, rust or other environmental effects.

In summary, the Grimdark style is a rich and immersive artistic approach that often combines a muted colour palette, weathering and detailed textures to convey a sense of bleakness, brutality, and desolation. This style's commitment to narrative storytelling and realism further enhances its impact on the viewer creating a unique and compelling visual experience.

Grimdark Compendium has a four part series on youtube which teaches you the fundamentals of the Grimdark painting style and are an excellent starting point. You will find part one of this series linked below:



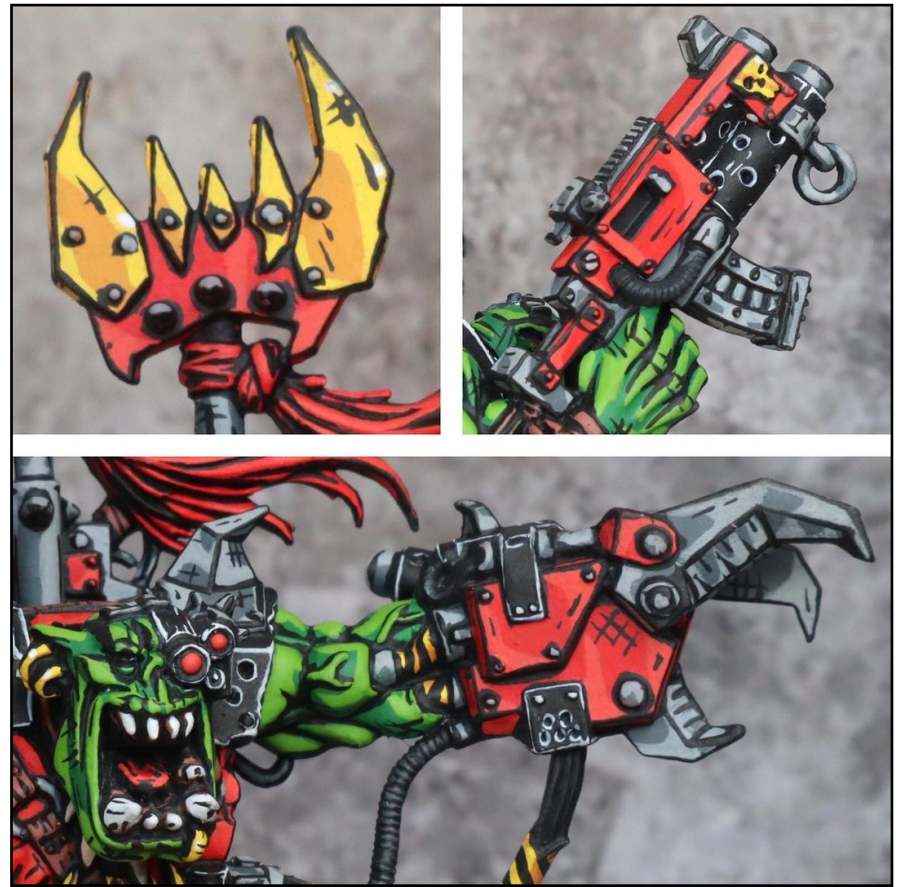
Trovarion also has his own variation of Grimdark using a heavily sponged and stippled method. It's a relatively simple approach but the results look fantastic. I actually tried this method on one of the first marines I painted and was extremely happy with the results. Here you can see a tutorial for a Blood Angels Grimdark scheme done using this technique:



Comic Style & Cell Shading

When incorporating comic style into miniature painting, the artist employs bold lines to outline different elements of the miniature. These lines serve not only to define the boundaries but also to add a sense of dynamism to the overall piece. The lines may be particularly pronounced around key features of the miniature such as weapons, facial expressions or armour details.

Moreover, the use of strong contrasts between light and shadow is integral to comic-style miniature painting. This involves strategically placing highlights and shadows to create a visually impactful effect. The contrasts add depth and dimension enhancing the overall appearance of the miniature.



Credit: [Thunderbrush](#)

Cell shading is applied to achieve a distinctive 2D, hand-drawn look on 3D models. Artists use bold lines to outline the various features of the miniature, akin to the characteristic black lines seen in traditional animation or comic book art. These lines serve to define the edges and contours of the miniature contributing to a graphical and stylised appearance.

The application of flat areas of colour is a key aspect of cell shading in miniature painting. Unlike traditional shading techniques that involve subtle gradients, cell shading utilises solid and uniform colour blocks to represent different surfaces. This creates a deliberate and pronounced transition between light and shadow, giving the miniature a more graphical and less realistic quality.

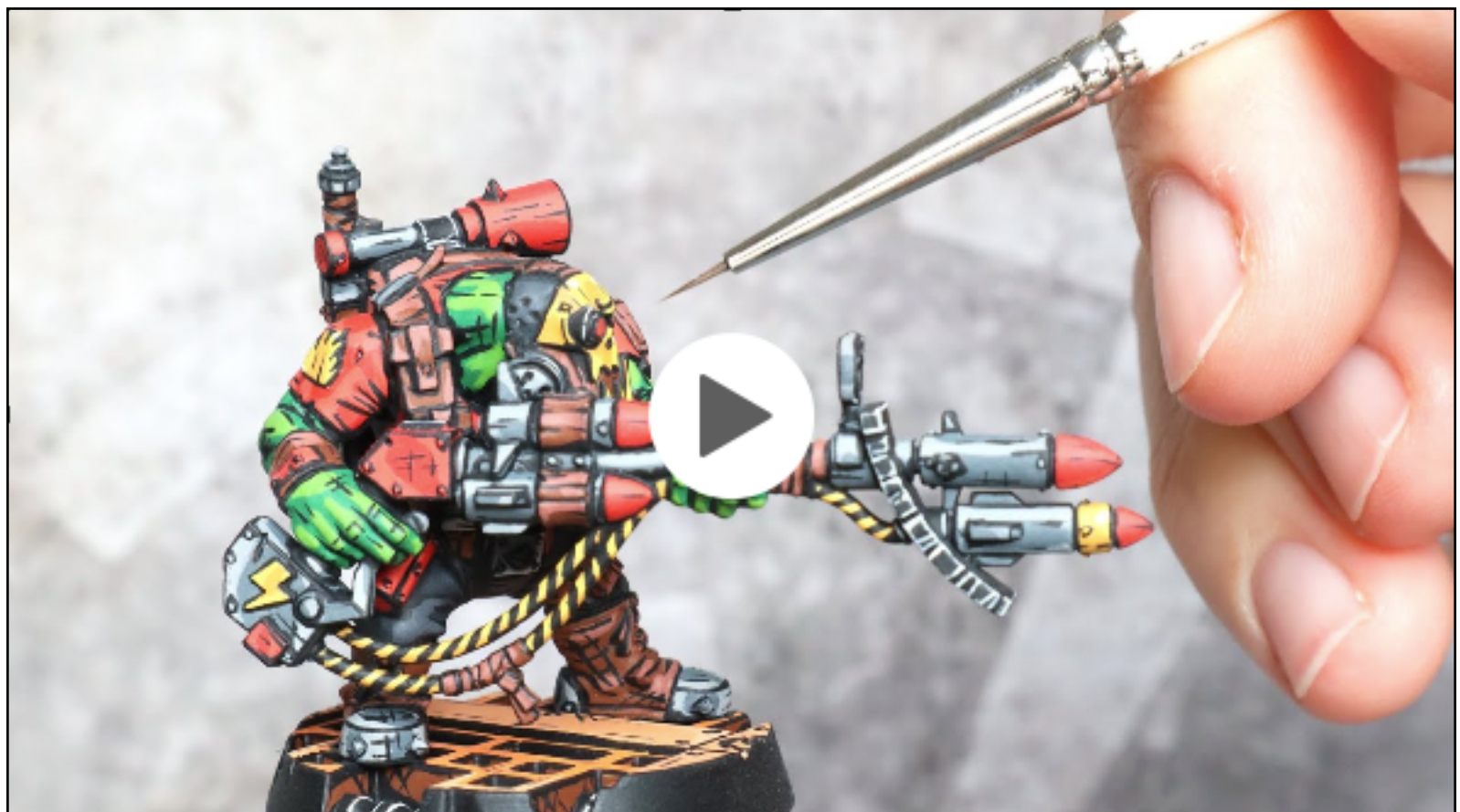
Similar to comic style, edge highlighting plays a role in cell-shaded miniatures. Lighter colours are applied along the edges of objects, accentuating their contours and further enhancing the graphical aesthetic. This technique adds a crisp and clean finish to the miniature contributing to the illusion of a hand-drawn, animated character.

MarcoFrisoniNJM demonstrates how this style can be applied to miniatures in [this playlist](#), showcasing the process of shading and highlighting in a quick and effective manner. He also emphasises the importance of understanding shapes and abstract forms in painting and drawing:



Epic Duck Studios also have this [great video series](#) of tutorials featuring a huge variety of miniatures from different brands all painted in the comic book style:

While not an instructional guide, this time-lapse video from Thunderbrush Studio offers a captivating glimpse into the artistic process. Witness one of the masters of this painting style creating a stunning piece from inception to completion:



Slap Chop

The Slap Chop technique is a process that begins with priming the model in a dark colour, typically black. This initial step establishes a shadowy foundation that sets the stage for subsequent layers of paint. The dark primer acts as a base enhancing the depth and contrast in the final result.

This is then followed by multiple stages of [dry-brushing](#) which involves using a brush with minimal paint allowing the bristles to catch the raised surfaces of the miniature. In the context of Slap Chop, this technique starts with a mid-tone grey and progresses to lighter greys and whites. Each layer builds upon the previous, gradually illuminating the model and creating a pronounced sense of texture. The progression from dark to light during dry-brushing mimics the natural interplay of light and shadow enhancing the miniature's three-dimensional appearance.



Credit: [Heresy Is My Therapy](#)

Once the dry-brushed layers achieve the desired level of illumination and texture, the next phase introduces contrast paint. Contrast paints are specifically formulated to settle into recesses enhancing shadows and adding colour depth, whilst tinting the lighter raised areas and simulating highlights. In the Slap Chop technique, these paints are strategically applied to different areas of the model providing a vibrant and nuanced colour palette while further accentuating the contrast between light and dark.

The incorporation of contrast paints not only introduces colour but also serves as a unifying element tying together the varied tones created during the dry-brushing process. The result is a miniature that showcases a harmonious blend of shadows, highlights and colours, all achieved through a combination of dry-brushing strokes and strategic contrast paint application.

Rob from The Honest Wargamer has this very easy to watch video about the Slap Chop method. The video shows him painting a miniature from start to finish and explaining a few tips and tricks that you can add to the process:



This follow up video by Artis Opus further discusses and analyses the Slap Chop technique, providing tips and improvements to enhance its effectiveness and versatility without changing its core principles. The video demonstrates various techniques and experiments with different colours to achieve different desired results:



Ultra-realism

Hyper-realistic miniatures represent the pinnacle of artistry, where the objective is to transcend the boundaries of the miniature form and create a visual illusion of reality on a tiny scale. Artists who delve into the realm of hyper-realism embark on a journey of precision, craftsmanship and an unwavering commitment to capturing the essence of realism.

Fine blending emerges as a cornerstone technique in hyper-realistic painting. It requires skilful mixing of colours as well as a seamless transition from one shade to another. This delicate blending not only captures the nuances of light and shadow, but also enhances the overall smoothness of surfaces. It's a laborious process demanding patience and a keen eye for subtle gradations.



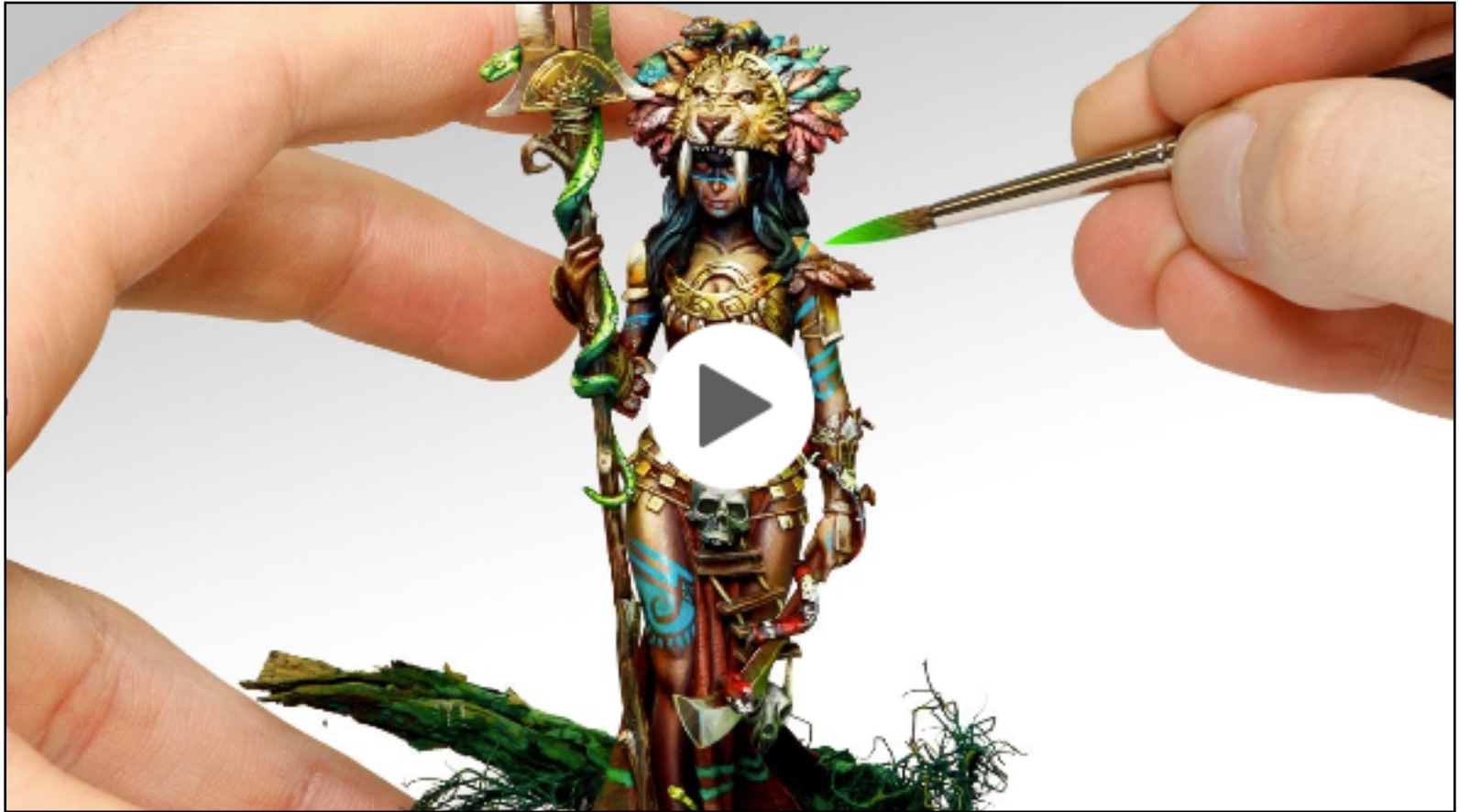
Credit: [jojiko334](#)

Highlighting and shading, executed with precision, play pivotal roles in achieving hyper-realism. Artists strategically apply lighter tones to accentuate raised areas, mimicking the way light naturally interacts with surfaces. Conversely, shadows are carefully introduced to create depth and dimension, enhancing the illusion of a miniature existing in a tangible space. Detail becomes an obsession in hyper-realistic painting. Every crevice, every texture, and every minute feature of the miniature demands attention.

Beyond the technical aspects, hyper-realistic artists often invest time in studying real-world references to inform their work: observing the play of light on different materials, understanding the subtleties of colour variation, and analysing how the textures found in nature contribute to the nuanced and realistic portrayal of the miniatures.

The outcome of hyper-realistic miniature painting is nothing short of breathtaking. These miniatures transcend their gaming origins, becoming art pieces that evoke a sense of awe and admiration. Whether displayed on a gaming table or showcased as standalone works, hyper-realistic miniatures are a testament to the fusion of skill, passion and a desire to bring fantasy to life in the most realistic and captivating manner possible.

This video by Sergio Calvo Miniatures shows just how much time, effort and skill goes into painting a hyper realistic miniature:



PAINTING TECHNIQUES

What this section covers:

This section explores a range of painting techniques designed to create various effects and styles. It includes methods for blending colours, achieving special effects and more. By delving into these techniques, artists can expand their repertoire and unleash their creativity.

Edge Highlighting

Edge highlighting in miniature painting is a precise technique that enhances the charm of small-scale models. It acts like a subtle brushstroke, bringing vitality to the miniature by accentuating its shapes and edges.

Fundamentally, edge highlighting involves carefully applying a lighter colour (or a series of incrementally lighter colours) to the raised edges and prominent features of a miniature. This begins after establishing a solid base coat that captures the primary colours of the model, essentially providing a canvas for the forthcoming highlights.

Choosing the highlight colour is crucial, most typically opt for a shade lighter than the base colour. Artists may achieve this by blending the base colour with a lighter tone or selecting a pre-mixed lighter hue. The delicate nature of this technique demands fine-tipped brushes for precision.

Guided by an understanding of light and shadow, artists strategically apply the highlight to the edges, corners and protruding elements of the miniature. This is a thoughtful process requiring a steady hand and a discerning eye to ensure the highlight enhances rather than overwhelms the underlying details.

Consistency in the thickness of the applied highlight is key. Striking the right balance is an art in itself – too subtle and the effect may go unnoticed; too bold, and the miniature's proportions may lose authenticity.



Credit: [Mud Creek Miniatures](#)

The technique often involves a gradual layering process. Thin applications of the highlight are meticulously built up creating a smooth transition between the base colour and the highlighted edges. This layering not only adds depth but also contributes to a more lifelike and nuanced appearance.

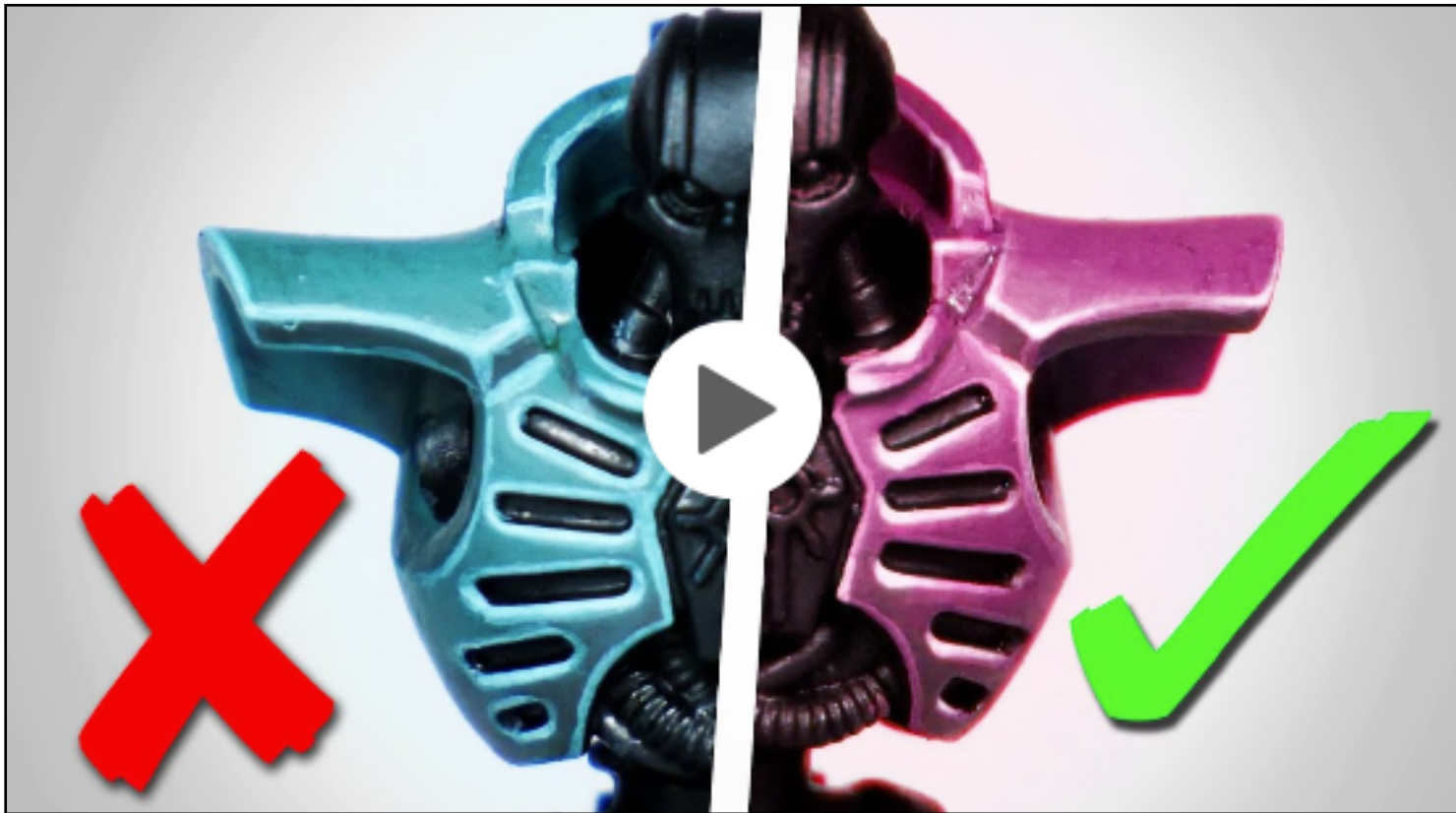
[Colour theory](#) plays a crucial role in edge highlighting. Artists consider the temperature of the base colour and choose warm or cool highlights accordingly. This thoughtful use of colour adds an extra layer of sophistication to the miniature, enhancing the overall visual experience.

Mastery of edge highlighting is an evolving skill developed through practice. Artists experiment with various brushes, explore different paint consistencies and refine their technique over time.

This video by Zumikito Miniatures explains the technique of edge highlighting in miniature painting including why it's important, how to do it properly and different approaches to achieve it. The video also covers the tools such as brushes, needed for edge highlighting, as well as the option of using drybrushing as an alternative. Additionally, it emphasises the importance of practice and offers tips for achieving the desired effect:



This short video by Trovarion Miniatures discusses the importance of proper edge highlighting in miniature painting and how it can instantly improve your results. It explains that instead of applying the same intensity of highlighting to all edges, a more realistic approach is to consider the angle of light and emphasise the brightest spots on surfaces facing upward. This technique creates a more credible representation of how light interacts with the miniatures:



SprayBlack Studios has this great video teaching you how to improve your edge highlighting in just two minutes by mastering brush control, thinning down your paint for smoother application, avoiding brush overload, making touch-ups and practicing on both miniatures and paper/cardboard surfaces:



Blending

Blending in miniature painting is a subtle and intricate method that brings a sense of depth and seamless colour transitions to a model. It is achieved by merging different shades that create a gradual shift in colours that enhances the overall beauty and realism of the miniature.

At its core, blending is a skilled way for artists to smoothly move from one colour to another, steering clear of harsh lines and sudden changes. This technique becomes especially valuable when aiming for realistic effects like lighting, shadows and detailed colour variations on a small model.

The process kicks off with applying base colours to lay the groundwork for the blending magic. Artists carefully choose colours that complement each other with darker tones representing shadows and lighter ones accentuating raised areas.



Credit: [41stmillenium_dave](#)

Blending offers a range of techniques including wet blending, glazing and layering. Wet blending involves applying wet paint directly on the model, mixing colours on the surface. Glazing and layering, on the other hand, builds up translucent paint layers to achieve a gentle colour transition.

[Colour theory](#) is a crucial element of blending. Understanding how colours interact is key. You might use a colour wheel to guide your choices ensuring that blended colours harmonise and contribute to the desired visual impact.

In essence, blending is the gentle choreography of colours on a miniature, creating a harmonious blend of tones and shades. It demands a delicate touch, a discerning eye and a mastery of the painter's craft to unveil the model's full potential where each blended hue plays a role in the aesthetic finish of the miniature.

Zumikito Miniatures explains the main blending methods for miniature painting in this short video including wet blending, stippling and layering/glazing, with each method discussed in detail and demonstrated on a miniature painting tutorial:



Zumikito Miniatures also provides this longer video with five hacks for achieving smooth blending on miniatures including tips on setting up a wet palette, using thicker layers of paint and stipple glazing. It also emphasises the importance of using fresh paint and refining the gradient with an airbrush:



Dark Lining

Dark lining is a meticulous technique in miniature painting that involves applying thin lines or shadows along the recessed areas of a model to enhance its definition and create a sense of depth. The primary goal is to accentuate the contours and details of the miniature by strategically placing shadows in the crevices to separate different colours.

This technique is particularly effective when dealing with small-scale models where intricate details may get lost without careful highlighting. Dark lining serves as a method to bring out these details making the miniature more visually appealing and realistic.

To achieve dark lining, painters use a fine brush and a dark-coloured paint often a shade darker than the base colour. The idea is to carefully trace the edges and recessed areas of the model, emphasising the natural shadows that would occur in a three-dimensional space. The thin lines create a visual separation between different elements of the miniature, preventing them from blending together.

Dark lining is versatile and commonly used in conjunction with other painting techniques, such as highlighting and shading, to achieve a balanced and polished overall appearance.

The skill lies in the precision of application – the artist must have a steady hand to avoid unintentional smudges or uneven lines. While dark lining is a subtle technique, its impact on the final result is significant, adding clarity and depth to the miniature.

In summary, dark lining in miniature painting is a methodical approach to defining the details of a model by carefully applying shadows along recessed areas. It is a fine balance between precision and subtlety, contributing to the overall quality and realism of the finished miniature.

In this video, Vince Venturella discusses the technique of black lining. The process involves using a sharp-pointed brush and either dark grey or black paint to trace the edges of different elements on the model. Throughout the video Vince explains why black lining is used and shows you how to do it on different areas of the miniature:



Recess Shading

Recess shading is a technique in miniature painting designed to accentuate the depth and intricacies of a model by applying shadows to its recessed areas. The primary objective is to enhance the visual appeal of the miniature by emphasising the natural contours and features through the strategic use of shading.

When employing recess shading, the artist carefully selects darker shades of paint, often a colour deeper than the base hue. This darker colour is then delicately applied to the recesses or indented sections of the model, creating a contrast that makes these areas stand out. The shadows produced contribute to a heightened sense of realism as they mimic the way light interacts with the surfaces of a three-dimensional object.

This technique is especially valuable for small-scale models where detailed features may be less pronounced. Recess shading allows the artist to bring these details to the forefront ensuring that they are not overshadowed by the surrounding areas.

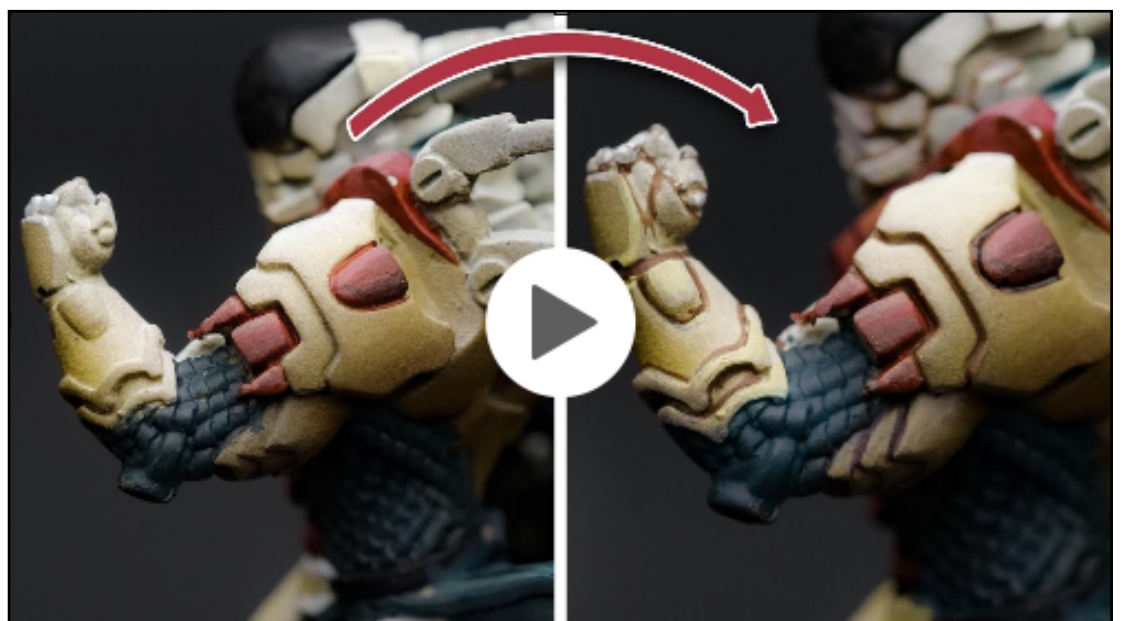
The process requires a keen understanding of light and shadow, as well as a steady hand to achieve precision in application. Artists must carefully navigate the contours of the miniature, selectively shading the areas where shadows would naturally fall.

Recess shading is often combined with other painting techniques, such as highlighting and layering, to create a harmonious and well-balanced overall effect. The careful interplay of light and shadow results in a model that appears more dimensional and visually engaging.

The video by Miniatic discusses the technique of recess shading. It explains the tools and materials needed as well as its benefits and how it fits into the painting process. It also emphasises the magic and aesthetic appeal of recess shading in enhancing the overall look of a model.



Credit: [Mud Creek Miniatures](#)



Washes

Washes serve as a transformative and foundational technique imparting depth, definition and a subtle sense of weathering to the model. This method involves applying a thinned-down, liquid-like mixture of paint, often darker than the base colour, to the entire surface of the miniature.

The primary purpose of a wash is to settle into the recessed areas and crevices, creating shadows and emphasising the contours of the model. The capillary action of the thin wash draws the paint into the deeper parts, leaving behind a darker tint in the recesses and providing a visually appealing contrast with the raised surfaces.

The application of washes requires a deft hand and an understanding of the desired outcome. Strategically direct the wash over the model, allowing the liquid to flow into the desired areas. Excess wash can be carefully absorbed or redistributed to prevent unwanted pooling.

Moreover, washes can be layered for added intensity or selectively applied to specific regions to achieve targeted shading. Combining washes with other techniques, such as dry brushing or edge highlighting, contributes to a more intricate and polished result. While washes are commonly associated with creating shadows, they can also be utilised for tonal variations and to unify colour schemes across the model.

This video by Angel Giraldez provides a step-by-step guide on how to apply washes, using different ranges and dilutions to achieve desired effects:



Tabletop Minions provides insight on how to properly use washes in painting to improve the overall look and blend of colours, emphasising the importance of working in sections and always moving in the same direction. Thin layers and multiple passes of the wash are recommended to achieve the desired effect:



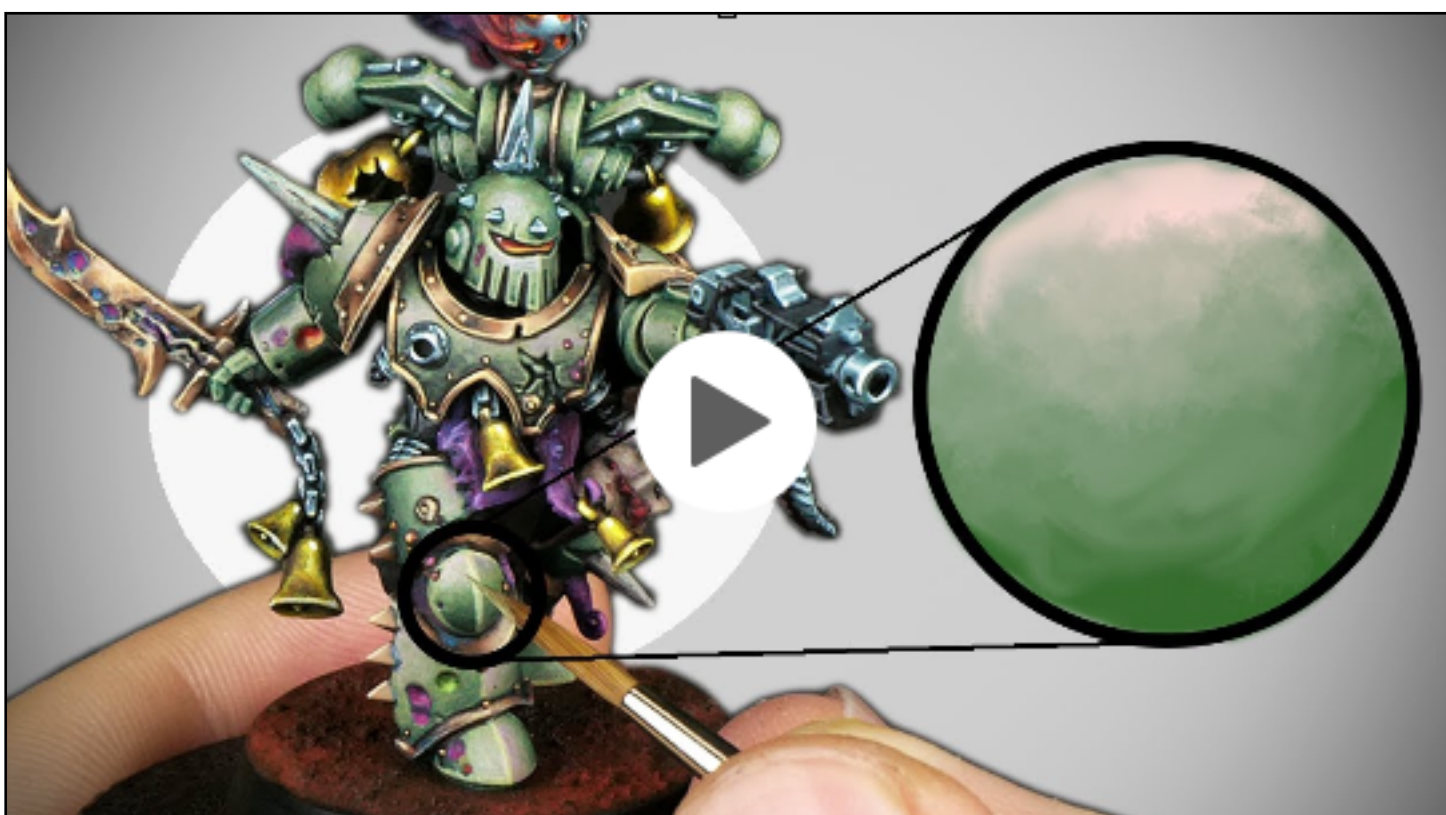
Feathering

Feathering in miniature painting refers to a technique used to create smooth transitions between colours or shades. It involves using a series of very fine and subtle brushstrokes to blend colours together seamlessly, creating a soft and gradual transition. This technique is commonly used in miniature painting to achieve realistic and detailed effects, especially when working on small-scale surfaces where precision is essential. Feathering requires a steady hand and a good understanding of colour theory to effectively create the desired visual effects - you must choose hues that harmonise well together. The technique is versatile and can be applied to achieve various effects, from subtle shifts in shading to the creation of intricate textures such as fur or weathered surfaces.

The process of feathering typically begins with a base coat, establishing the primary colour or colours on the model. You then employ a fine-tipped brush and a gentle touch to layer additional colours. The goal is to create a gradual fade or blend between these colours, avoiding any abrupt or stark transitions.

Feathering is particularly valuable when aiming for realistic renditions of organic textures, such as skin tones, fur or natural landscapes. The controlled blending of colours contributes to a more lifelike and nuanced appearance

In this video, Zumikito Miniatures explains how feathering is a blending technique used in miniature painting to achieve smooth transitions by spreading a layer of paint with a damp brush and how it works best with thick and dense paints; it is important to work with the paint while it is still wet to avoid creating a mess - and using two brushes can provide better control over brushstrokes. Feathering works well with paints that are close to each other on the colour wheel:



Layering

Layering in miniature painting is a technique that plays a fundamental role in achieving depth, dimension and visual richness in a model. It involves the strategic application of multiple translucent layers of paint to gradually build up colour intensity and highlights.

The process begins with laying down a base coat, establishing the foundational colour scheme for the miniature. Layering comes into play as you systematically apply subsequent coats of paint, each slightly lighter than the last, onto specific areas of the model. This incremental approach allows for the controlled enhancement of highlights, shadows and overall tonal variation.



Credit: [84paints](#)

The choice of colours in each layer is crucial as they must complement the underlying hues and contribute to the desired visual effect. Artists often consider factors such as the model's environment, lighting conditions and the intended atmosphere to inform their colour selections.

Fine-tipped brushes are indispensable for layering, enabling you to maintain precision and control over the application. The transparency of each layer allows the colours to blend optically, creating smooth transitions and gradients on the miniature's surface. This blending effect simulates the interplay of light and shadow, contributing to a more realistic and visually appealing result.

Layering is not confined to a specific number of coats; rather, it is a technique that allows for flexibility and adaptability. You may apply several layers to achieve subtle changes in colour, or may opt for fewer layers when seeking a more subdued effect. The key is to strike a balance that enhances the miniature's details without overwhelming its overall aesthetic.

The layering technique is often complemented by other methods to further refine the model's appearance. Mastery of layering requires a keen understanding of colour theory, light dynamics and patience to build up the layers gradually.

In this video, Vince Venturella provides tips, tricks and techniques for effectively layering paint to achieve smooth and cohesive blends with a focus on highlighting and brush control:



Once again, Zumikito Miniatures provides this excellent short video explaining how to use layering techniques to paint miniatures, emphasising the use of different paint consistencies for basecoating, shading, highlighting and edge highlighting:



Glazing

Glazing is a refined technique in miniature painting that involves applying thin, transparent layers of paint to a model. This method is typically utilised to subtly alter colours, tones and create nuanced effects on the miniature's surface. The goal of glazing is not to completely cover the underlying colours but to enhance and modify them, allowing for a controlled and gradual transformation.

These layers consist of highly diluted paint, often mixed with a glazing medium or water, to achieve a translucent consistency. You then delicately apply these thin layers over specific areas, allowing the underlying colours to shine through while introducing subtle shifts in hue or saturation.

Glazing is particularly effective for creating smooth transitions between colours, enhancing shadows and adding depth to the model. The transparency of the glaze allows for an optical blending of colours providing a realistic and visually appealing result. This technique is often used to simulate effects such as atmospheric perspective where distant objects appear lighter and less saturated.

The choice of colours in the glaze is crucial as it influences the overall mood and tone of the miniature. Consider the temperature of the colours and how they interact, creating a harmonious and cohesive visual experience. Additionally, glazing can be used to introduce specific colour washes or to add a subtle sheen to metallic surfaces.

The application of glazes demands a meticulous approach as each layer affects the final outcome. Artists may build up multiple layers gradually, allowing each to dry before applying the next. This patience and precision contribute to achieving the desired subtlety and realism in the model.

This video by Maverick Paint's is a must watch for anyone wanting to learn how to glaze or improve on their current technique. The video demonstrates how to blend paint with glazes by thinning down the paint with water and layering it on top of the base colour to create a transparent and gradual transition:



Credit: [84paints](#)



Don Suratos has this fantastic [YouTube series](#) explaining glazing on various miniatures using a variety of different mediums.

This video by JuanHidalgo Miniatures discusses the technique of glazing, emphasising the importance of brush loading and brush movement. It explains how the amount of water added to the paint is not the main issue, but rather the amount of paint on the brush and the direction of brush movements:



Dry Brushing

Dry brushing is an effective technique employed in miniature painting to accentuate surface details and textures. Despite its apparent simplicity, this method yields intricate and visually compelling results. The process involves using a brush with minimal paint, often nearly dry, to apply a lighter colour onto raised surfaces of a model.

Once the base coat is dry, a lighter colour is selected for dry brushing. Crucially, the brush is dipped lightly into the paint and then most of it is removed by wiping it on a texture palette. This leaves only a faint residue of paint on the bristles. With a gentle and sweeping motion, you then apply the dry brush to the raised areas of the model allowing the minimal paint on the brush to catch the surface details.



Credit: jmg.miniatures

The technique is versatile and adaptable to various scenarios. Dry brushing is often utilised to simulate weathering, aging or texture on a model. It can be particularly effective in highlighting edges, wrinkles or rough surfaces, creating a visually striking contrast with the base colour. This method is commonly employed in scenarios where the goal is to emphasise the surface details without overpowering the overall appearance.

Dry brushing is an invaluable tool for achieving depth and dimension in miniature painting. It is frequently used to enhance the three-dimensional quality of models, bringing out the intricacies that might otherwise go unnoticed. This technique is especially beneficial for terrain, armour or organic textures where a subtle touch of highlighting can significantly contribute to the overall visual interest.

Dry brushing is often used before contrast paint, establishing a strong foundation of highlights and textures, ensuring that the subsequent application of contrast paint enhances the model's details and depth.

While seemingly straightforward, mastering dry brushing requires a delicate touch and an understanding of how the technique interacts with different textures and surfaces. It is an essential skill in the miniature painter's toolkit, providing a quick and effective method to add visual interest and realism to a model. When executed with finesse, dry brushing transforms a static representation into a dynamic and visually engaging miniature.

Vince Venturella has this extremely useful video guide to dry brushing. The video explains the basics of dry brushing and demonstrates various uses including picking out details, creating overlap colours and enhancing shading:



Artis Opus, manufacturers of high quality dry brushes, also have this dry brushing video. This video is a comprehensive guide on how to dry brush miniatures, covering techniques for beginners to advanced painters. The tutorial demonstrates step-by-step instructions and tips for achieving organic blends, soft fades and high contrast highlights using dry brushing:



Following on from the video by Artis Opus, Fauxhammer has this video which provides ten tips for improving your dry brushing technique in miniature painting. He met up with Byron at Artis Opus and went through the things he had learned from their video and let Byron show him what he hadn't picked up on from their guide:



Stippling

Stippling is a technique in miniature painting that involves creating textures or patterns by applying a series of tiny dots or specks of paint. This method requires a steady hand, precision and careful control over the brush, resulting in a visually textured and intricate surface on the model.

Stippling is employed to introduce variations, highlights or textures to specific areas of the model. The artist uses a brush with a fine tip and lightly taps or dots the surface with paint. The density and arrangement of these dots determine the overall effect, whether it be a subtle texture, a pattern or a nuanced transition between colours.

Stippling can be used for various purposes in miniature painting. One common application is to simulate the appearance of rough or textured surfaces such as stone, fur, or weathered materials. By strategically varying the size and concentration of dots, the artist can create the illusion of depth and complexity on an otherwise flat surface.



Credit: [magnusmaegtig](#)

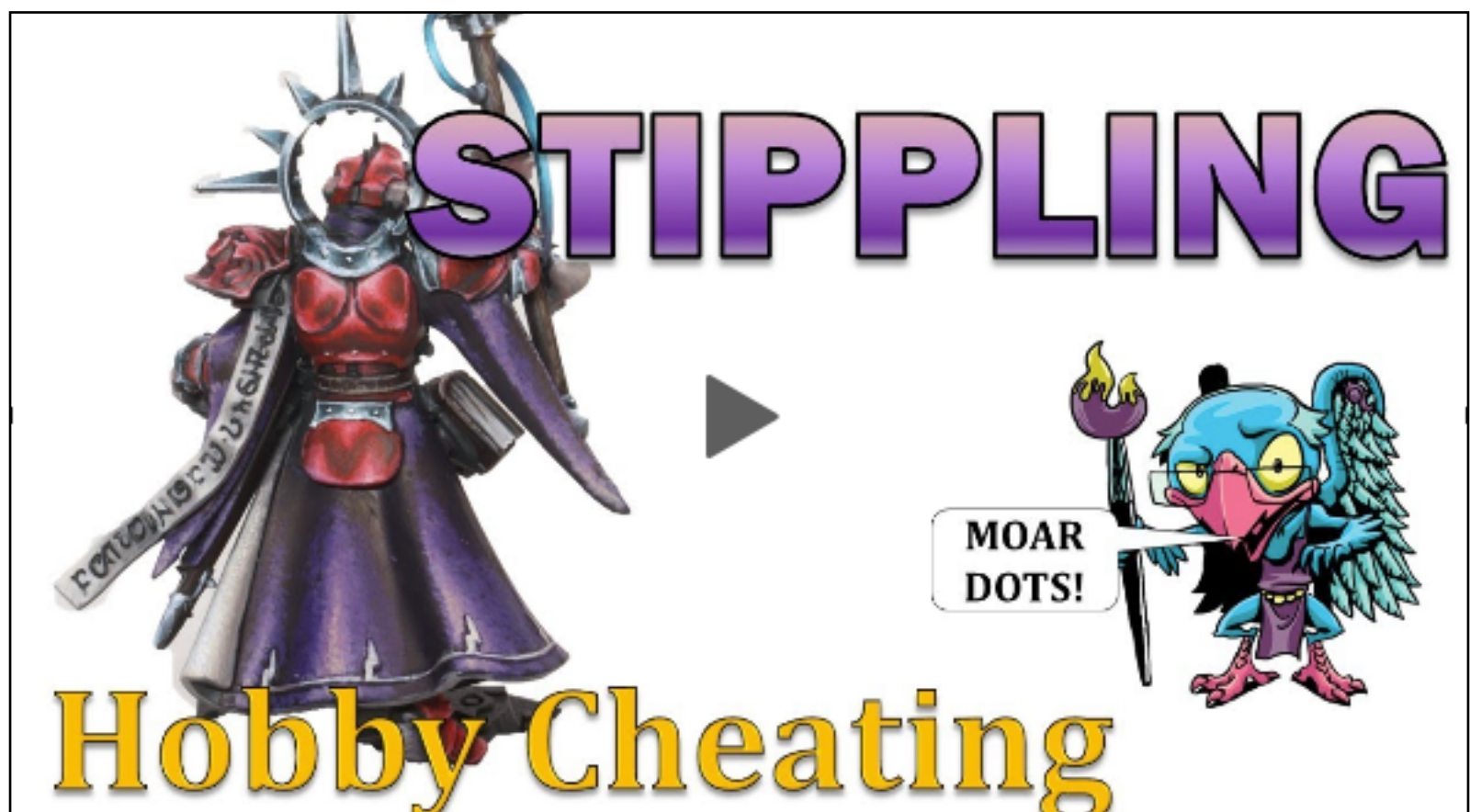
It can also be employed as a blending technique in miniature painting to achieve gradual transitions between colours or tones. While stippling is traditionally associated with creating textures or patterns, its application in blending involves using tiny dots strategically to merge different colours seamlessly. This technique is particularly effective when aiming for subtle transitions or a speckled, natural look.

Stippling requires patience and practice as achieving the desired effect relies on the artist's ability to control the brush and maintain consistency in dot size and spacing. It's a methodical and deliberate process and the result is often a finely detailed and visually engaging model.

This video by Zumikito Miniatures is a 5-minute explanation of the stippling painting technique. It covers how to use small dots or areas of paint to create smooth gradients and blend colours and textures on miniatures. The technique combines the speed of dry brushing with the accuracy of layering making it useful for various surfaces and achieving impressive results quickly:



This lengthier video by Vince Venturella shows the technique of stippling to achieve smooth blends and create texture on a miniature's cloak. He gradually builds up the highlights and integrates a complementary colour to enhance contrast. The process is time-consuming but can be made faster by creating colour bands and using stippling to blend them together which he explains in this tutorial:



Wet Blending

Wet blending is an advanced and versatile technique in miniature painting that involves blending two or more colours directly on the model's surface while the paint is still wet. This method offers a seamless transition between colours, creating smooth gradients and intricate shading. Wet blending provides a dynamic and fluid approach to achieving nuanced colour transitions and it requires both skill and a good understanding of paint consistency and colour theory.

Select the colours you want to blend and place them adjacent to each other on the model. With the paint still wet, use a fine-tipped brush to carefully blend the colours together directly on the model. This involves skilful strokes and a delicate touch to create a seamless transition. The wetness of the paint allows the colours to mix and merge, producing gradients that are challenging to achieve with traditional layering techniques.

Wet blending is particularly effective for creating realistic transitions between highlights and shadows, capturing the interplay of light on the model's surface. It is often used for larger surfaces or areas where a smooth transition is essential such as on clothing or skin tones.

The success of wet blending lies in the artist's ability to work swiftly as the wet paint dries relatively quickly. You may need to blend small sections at a time, working in a controlled and focused manner to achieve the desired effect before the paint sets. The working time of the paint can be increased by using certain mediums or additives which increase the drying time.

While wet blending demands practice and a steady hand, the results can be extraordinary. The technique allows for a level of subtlety and realism that adds depth and dimension to the model.

The video by Miniac explores different methods for wet blending and provides tips and techniques for achieving a smooth blend. It also emphasises the importance of brush direction, paint consistency and understanding mask tone and undertone when wet blending:



Weathering

Weathering is an artful technique that simulates the effects of time, wear and environmental exposure on a model's surface. It is a process through which artists recreate the natural wear and tear that objects undergo, adding a layer of realism and narrative depth to the miniature.

The primary goal of weathering is to convey a sense of history and authenticity by depicting the impact of elements such as sun, wind, rain and use on the model. This technique is commonly employed to represent aged materials, battle-worn armour, rusty machinery or weathered landscapes.



Credit: [grimdark_gravis_guy](#)

The process of weathering involves various methods and mediums, each contributing to the overall effect. Paint chipping is a common technique where artists strategically apply small chips or flakes of paint to simulate the gradual erosion of surface coatings. This is often done on edges, corners and areas prone to impact, sometimes using a small piece of sponge to carefully apply the random appearance of texture.

Rust and corrosion effects are achieved by layering different colours and textures imitating the oxidation of metals over time. This adds a realistic patina to metallic surfaces conveying a sense of age and exposure to the elements.

Additionally, weathering includes techniques like washes and stains where diluted paints or specialised weathering products are applied to create streaks, grime or discolouration. This method mimics the accumulation of dirt or pollutants on surfaces.

Weathering also involves the use of pigments and powders to add texture and depth to the model. Strategically apply these powders to create dust, mud or textured surfaces contributing to the overall visual narrative of the miniature.

Zumikito Miniatures once again comes in with this short video explaining various techniques for weathering miniatures including chipping, oil washes and using dry pigments for a dusty or grimy effect.



TMM

True Metallic Metal (TMM) in miniature painting is a technique that imparts a realistic metallic appearance to surfaces through the use of paints containing actual metallic particles, typically mica, aluminium or other reflective materials. Unlike non-metallic metal (NMM), where artists simulate metallic sheen through careful colour blending, TMM leverages the inherent reflective nature of metallic pigments to achieve an authentic and convincing metallic look on miniatures.

The key component of TMM lies in the metallic paints themselves. These paints incorporate small particles of reflective materials which create a shimmering effect when applied to the miniature's surface. The reflective particles in the paint mimic the way light interacts with real metal, resulting in highlights and shadows that shift dynamically with changes in lighting conditions.

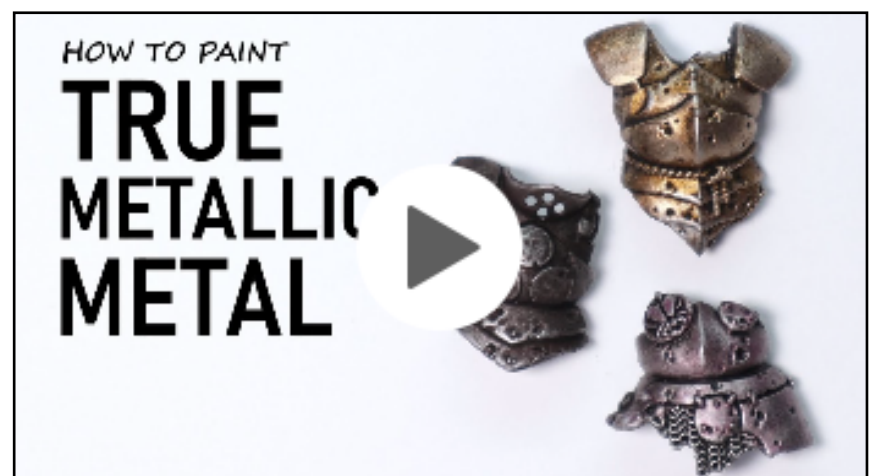
Artists employing TMM must navigate the nuances of light and shadow to create a convincing illusion of metal. The application of the metallic paint requires a keen understanding of the imaginary light source within the scene, allowing artists to strategically place highlights on areas that catch light and shadows in recesses or areas shielded from light. This meticulous attention to light and shadow contributes to the realism of the metallic surface.

TMM is versatile and adaptable to various styles and genres within miniature painting. Whether depicting gleaming, pristine armour or aged, battle-worn weapons, the technique provides a broad range of possibilities.

If you are looking for a speedy way to paint different metals in TMM, this video by The Hobby Grotto could be of some use; the video demonstrates three different techniques to paint true metallic metal including using gold with washes, using contrast paints as glazes, and creating a dark and dingy effect with dark silvers and washes.



Credit: [jmg.miniatures](https://www.jmgminiatures.com)



JuanHidalgo Miniatures provides a step-by-step guide on how to achieve a true metallic metal effect in painting miniatures inspired by the work of Angelo Dicello. The tutorial covers techniques for highlighting, blending, shading and adding reflections to create a realistic and impressive gold armour effect:



Trovarion Miniatures has this excellent video explaining the techniques for painting miniatures using both metallic and non-metallic metal, highlighting the differences in approach and the effects achieved with each. He shows the miniatures side by side to compare and analyse both techniques:



NMM

Non-Metallic Metal (NMM) is a sophisticated and advanced technique used to create the illusion of metal surfaces without employing metallic paints. Instead of relying on reflective particles, NMM relies on understanding light, shadows and colour theory to simulate the appearance of metallic sheen.

In the NMM technique, artists use regular paints to craft a surface that appears reflective, mimicking the qualities of metal. This involves carefully selecting colours that replicate the tonal range of real metal, from the darkest shadows to the brightest highlights. By strategically applying these colours, artists create a visual impression of metal without using metallic pigments.

The success of NMM hinges on the artist's ability to comprehend and replicate the way light interacts with metal surfaces. This includes considering the direction and intensity of the imaginary light source in the scene. NMM demands precision as artists carefully paint gradients and transitions to convey the reflective properties of metal convincingly.

Layering and glazing are fundamental aspects of NMM. Artists build up layers of paint to achieve smooth transitions between dark and light areas. By skilfully blending colours, they create the illusion of polished or weathered metal, complete with highlights and shadows that give depth and dimension to the miniature.

NMM is a versatile technique that can be adapted to various styles and settings within miniature painting. Whether depicting a gleaming suit of armour, a worn blade, or a smooth metallic surface, the NMM technique allows artists to explore a wide range of metallic effects using only standard paints.



Credit: [helpmepaint](https://www.helpmepaint.com/)



Kujo Painting provides a comprehensive guide on how to paint NMM, focusing on highlighting techniques for different shapes such as squares, cylinders, cones and spheres. They then move on to actual miniatures and explains where to place both highlights and shadows. It's an extremely educational video and a great starting point to NMM.

Darren Latham also has this [fantastic article](#) explaining the theory and technique behind painting NMM on miniatures. He discusses how to create convincing metal effects by observing how light reflects and reacts to different metallic surfaces and provides tips on where to place initial guide highlights and how to change the tone of the colour when painting different angles. Darren also emphasises the importance of adding reflection highlights for a realistic shiny-metallic finish.

If you have already tried your hand at some NMM and are looking to make some improvements, this quick video by Kolectiv SG could help. It provides four quick tips to improve non-metallic metal painting, including black lining, volumetric highlighting, edge highlighting, and adding reflected light:



OSL

Object Source Lighting (OSL) is a captivating and advanced technique that introduces a dynamic and realistic element to a model. This approach involves simulating the effect of light emanating from a specific object within the scene and casting its glow onto surrounding surfaces. The goal of OSL is to create a convincing illusion of illumination, adding depth and visual interest to the miniature.

The process begins by identifying the source of light on the model, such as a lantern, plasma pistol, or any object that emits light. Once the light source is determined, the artist carefully establishes the colour and intensity of the light. This choice is crucial as

it dictates the overall mood and atmosphere of the scene. For instance, a warm-yellow light may suggest a flickering flame, while a cold-blue light may evoke a magical ambiance.

The next step involves strategically applying the chosen light colour to both the object emitting the light and the surfaces that would be directly influenced by it. This includes nearby structures, clothing or other elements that would be illuminated by the source. You must carefully consider the direction and intensity of the light, ensuring that it realistically interacts with the model's environment.

Shadows play a pivotal role in OSL as they provide contrast and depth to the illuminated areas. Artists delicately blend the transition between the lit and shadowed regions, creating a seamless and convincing effect. This requires a keen understanding of light behaviour, as well as a mastery of shading and highlighting techniques.

Achieving a convincing OSL effect demands precision and patience. You may need to layer multiple thin coats of paint to build up the desired glow gradually. Additionally, the application of highlights and shadows must align with the direction and characteristics of the light source.

Object Source Lighting is a powerful tool for narrative storytelling in miniature painting. It not only enhances the realism of a scene but also adds a layer of storytelling. When executed skilfully, OSL transforms a miniature from a static representation into a captivating, visually dynamic piece of art.

This video by Artis Opus tutorial teaches you how to create object source lighting (OSL)

[△ Contents](#)



Credit: [helpmepaint](#)

effects on miniatures using directional strokes and dry brushing techniques, without the need for an airbrush. The tutorial breaks down the process step by step offering tips and advice for achieving a realistic glowing effect:



[This article](#) by Light Miniatures discusses the technique of Object Source Lighting (OSL) and other lighting effects in miniature painting. It also provides some rules and tips for creating realistic and impactful light sources on miniatures, as well as a step-by-step painting process.

This video by Zumikito Miniatures teaches you how to paint realistic glow effects, specifically focusing on the principles of OSL. The video covers the importance of light source, colour, and distance in creating convincing glow effects, providing step-by-step instructions on how to achieve the desired look:



COLOUR THEORY

Colour theory is a comprehensive framework that guides our understanding of how humans perceive and utilise colour. It applies to various fields such as art, marketing and design, offering structured principles for colour mixing, harmony and contrast. Drawing from physics, optics and human perception, colour theory encompasses concepts like; the colour wheel; primary, secondary, and tertiary colours; colour psychology; and objective measures of colour. In simpler terms, it is both a science and an art that influences how we use and interpret colour in visual compositions.



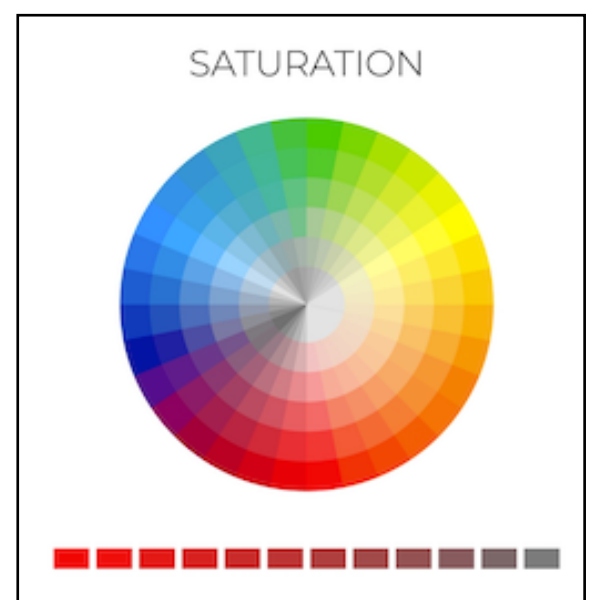
It's worth getting an understanding of colour theory certain terms, so I will try and explain them as best I can.

Contrast

In colour theory, contrast refers to the noticeable difference between colours or tones within a composition. It involves creating distinctions that make individual elements stand out from one another, enhancing visual interest and clarity. Contrast can manifest in various ways including differences in hue, saturation, temperature, texture and value. By strategically using contrasting elements, artists draw attention to specific areas, guide the viewer's gaze, and create dynamic and visually engaging compositions.

Saturation

Saturation refers to the intensity, vividness or purity of a colour. A highly saturated colour is vivid and vibrant, while a desaturated colour appears more muted or diluted. Saturation is one of the three components of colour, alongside hue (the actual colour) and brightness (lightness or darkness). Manipulating saturation allows artists to create various effects and moods within a composition. A colour at full saturation is considered pure, while a desaturated colour has been mixed with white, grey, or the complementary colour to reduce its intensity.



Value

Value refers to the lightness or darkness of a colour. Value is determined by the amount of light present in a colour; lighter values have more light and darker values have less light.

When creating a grayscale from a colour, the variations in value become apparent. For example, a light pink has a high value, while a dark burgundy has a low value. Value is crucial in creating contrast, depth, and dimension in visual compositions, as it influences how colours interact and appear in relation to one another. In essence, value represents the range between the lightest and darkest tones in a colour.

Hue

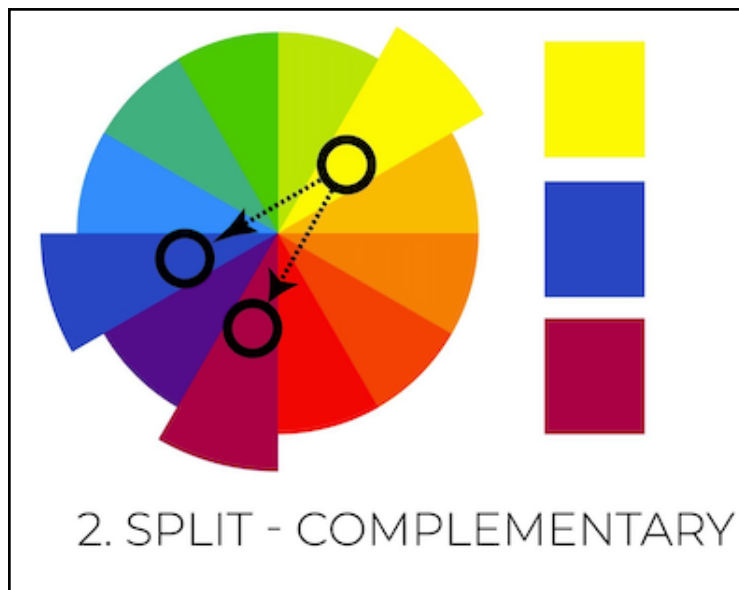
Hue refers to the basic property of a colour that distinguishes it from other colours. It is often described by the name of the colour itself such as red, blue or yellow. In essence, when we talk about the hue of a colour, we are identifying its position on the colour wheel and categorising it by the specific wavelength of light it represents. For example, different shades of blue, like navy or sky blue, share the same hue but may differ in saturation and value.



The colour wheel organises colours based on their relationships. It serves as a tool to identify and explore various colour schemes, providing artists with a foundation to make informed choices. Colour schemes are blends of colours that come together to create visually appealing aesthetics. Essentially, they're the "secret sauce" for making painted things look fantastic. Grasping these schemes is especially handy in miniature painting where each scheme brings its unique strengths and weaknesses into play. Now, let's dive into the seven commonly used types of colour schemes:

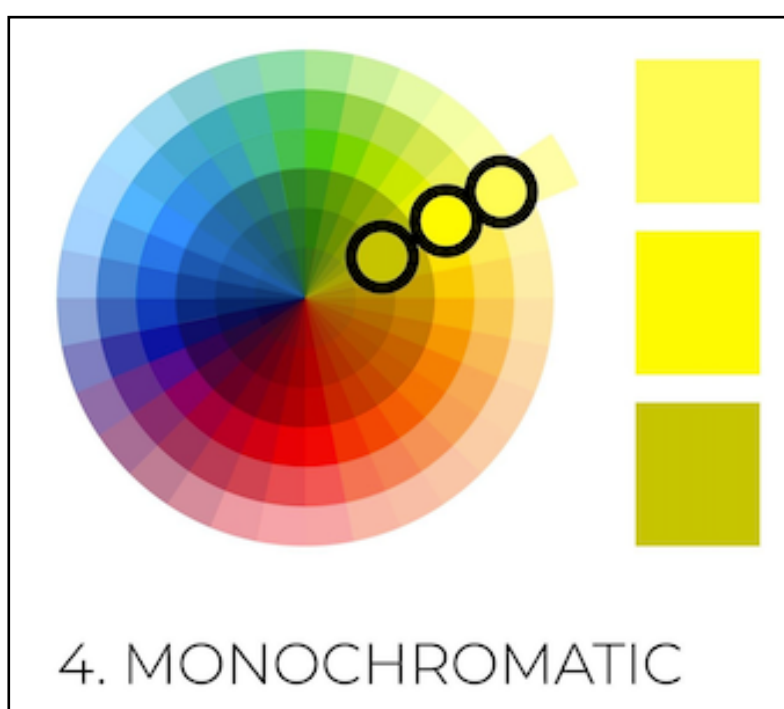
Complementary colours, strategically placed opposite each other on the colour wheel, hold special significance. When used together, they generate dynamic contrasts infusing the composition with vibrancy and interest. However, it's crucial to fine-tune the values and saturations for a well-balanced result.





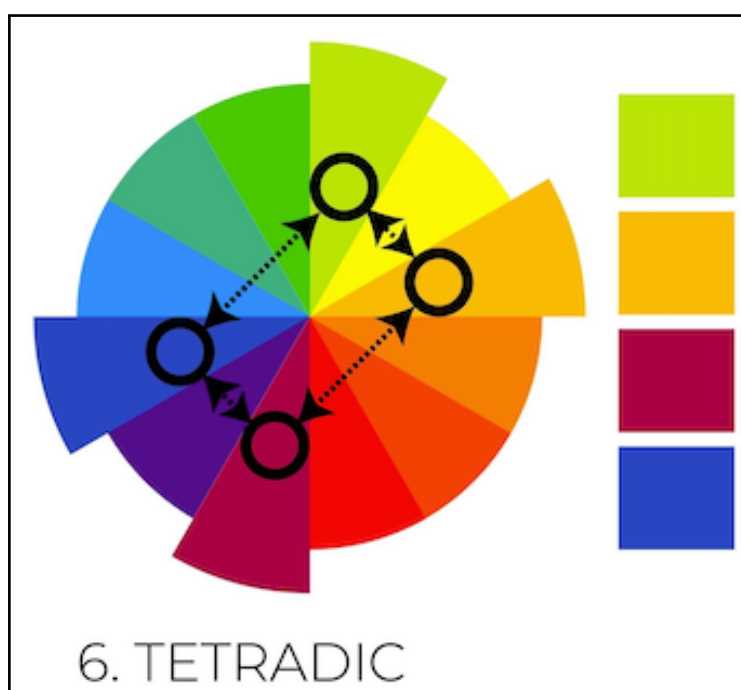
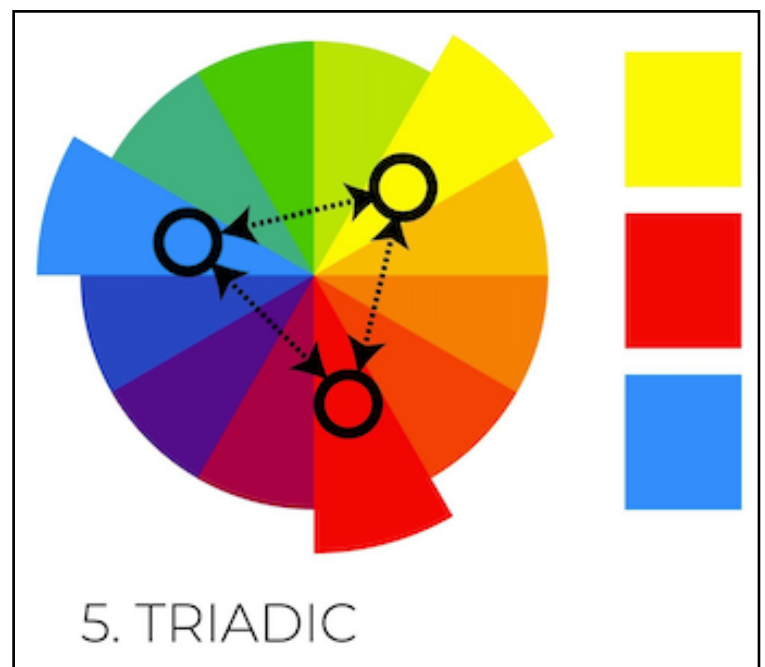
A **split-complementary** colour scheme is a variation of the complementary colour scheme. In a split-complementary scheme, instead of using the colour directly opposite on the colour wheel, two adjacent colours to the complementary colour are chosen. This results in a colour palette that retains the high contrast of complementary colours while offering a bit more variety and less tension.

Analogous colours, located next to each other on the colour wheel, contribute to a more subtle and harmonious palette. This approach is often chosen to evoke a sense of unity and cohesion in the miniature painting. Artists may leverage these adjacent hues to create a smooth transition and flow within the artwork.



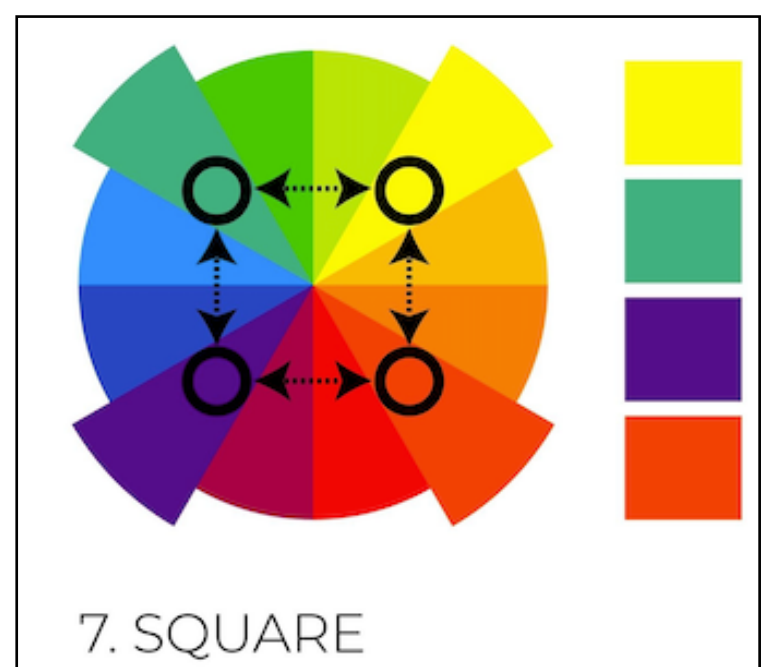
A **monochromatic** colour scheme involves using different shades, tones and tints of a single colour. The result is a harmonious and cohesive look as all the colours stem from the same hue. For example, if blue is chosen as the base colour for a monochromatic scheme, the palette would include light blue, medium blue, dark blue, and various shades in between. This creates a subtle and unified aesthetic, making it a popular choice for its simplicity and elegance. Monochromatic colour schemes are easy to create and can be visually impactful while maintaining a sense of unity.

A **triadic** colour theme is a colour scheme that involves three colours evenly spaced around the colour wheel, forming an equilateral triangle. This arrangement creates a harmonious and balanced combination of colours. The three colours chosen for a triad can be primary colours (red, blue, yellow), secondary colours (green, orange, purple), or a mix of both. Triadic colour schemes provide a diverse range of colour contrasts while maintaining overall colour balance in a design or artwork. Artists and designers often use triad colour schemes to achieve visually appealing and dynamic compositions.



A **tetradic** colour scheme, also known as a double complementary colour scheme, involves using four colours together; in the form of two complementary colour pairs. In simpler terms, it's like selecting two sets of opposite colours on the colour wheel. Tetradic colour schemes can create vibrant and visually interesting designs but require careful balance to avoid overwhelming the viewer. They offer more colour variety than other schemes, making them versatile for various creative applications in art, design and aesthetics.

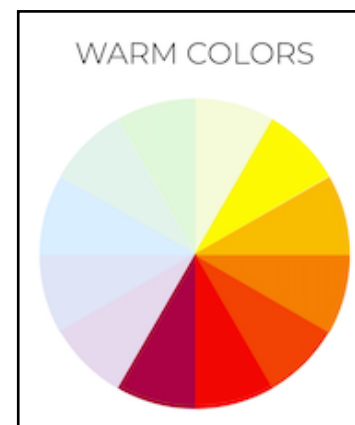
The **square** colour scheme incorporates four colours evenly distributed around the colour wheel. Similar to the tetradic scheme, it presents a diverse palette, but maintaining a sense of coherence requires thoughtful balance. In other words, it's essential not to go overboard with too many colours, keeping the composition harmonious and visually pleasing.



You might observe that certain colour schemes take the spotlight more often in miniature painting, but it's worth noting that all of them play a role in some way or another.



Colour temperature is another crucial aspect of colour theory in miniature painting. Warm colours (reds, oranges, yellows) convey a sense of warmth and energy, while cool colours (blues, greens, purples) evoke calmness and tranquillity. Skilful manipulation of colour temperature allows artists to evoke specific emotions or set particular atmospheres within their miniature painting.



Considering factors such as hue, value and saturation adds depth to the understanding of colour theory in miniature painting. Hue refers to the actual colour itself, value determines the lightness or darkness of a colour, and saturation measures the intensity or vividness of a colour. By carefully balancing these elements, artists can achieve nuanced and visually engaging compositions.

In conclusion, mastering colour theory is an excellent skill in miniature painting as it serves as a guiding compass for creating visually captivating pieces. By understanding how colours interact, blend and contrast, you can confidently mix and apply colours, enhancing the depth, vibrancy and overall aesthetic appeal of your creations. It's not just a technical skill; it's the key to bringing miniatures to life with precision and creativity.

Below, you'll find links to different guides on colour theory - that I've personally read and utilised to enhance my understanding - supplementing the information already shared. I recommend exploring these guides for a more in-depth breakdown of colour theory, offering a deeper insight into the subject.

[This article by Starbrush Miniature Studio](#) discusses the importance of colour theory in miniature painting and explores various colour harmonies that can be used to create visually appealing and harmonious miniatures. It covers all of the information we have already looked at and more, in greater detail. The article also highlights the use of colour harmony in Games Workshop miniatures and provides tips on creating harmony through temperature by understanding warm and cool colours.

A League of Ordinary Gamers also has [this article](#) explaining how and where they learned about colour theory. With the use of videos they go into some detail about things such as such as mixing colours to create shadows and highlights, the difference between warm and cold colours, and the importance of using harmonies in painting.

Marco Frisoni also has [this excellent series](#) on YouTube which delves into the world of colour theory, from the basics all the way through to some fairly specific videos.

AIRBRUSH GUIDE

Diving into the world of airbrushing miniatures offers a fantastic avenue to elevate your hobby. While it demands patience and practice, especially for newcomers, this guide aims to simplify the process for you, making your foray into airbrush painting smoother than ever!

For many enthusiasts, investing in an airbrush often comes later in their hobby journey. It is seen as a more advanced tool that may seem intimidating initially. However, I assure you that it's simpler than it appears. Affordability can also pose a challenge early on as top-notch airbrush setups tend to be pricey, although there are budget-friendly alternatives.



In my case, I had the luxury of allocating funds to kickstart my hobby setup. I opted for a high-quality airbrush and compressor, initiating a deep dive into airbrushing through extensive research. The information below highlights what I've discovered along the way.

To kick things off, let's explore the essential equipment for airbrushing. Some are indispensable while others, although optional, come with noteworthy advantages.

While I'll aim to suggest budget-friendly options where feasible, I firmly believe that with certain products, going for the cheapest isn't the best strategy - especially when it comes to the airbrush. When I was navigating the decision of which airbrush to purchase, I received advice from several experienced individuals to invest in the best gun I could afford. The reasoning behind this was simple: starting with a top-quality airbrush ensures a positive experience from day one. Opting for lower-quality alternatives often leads to more issues and problems, potentially discouraging further use.

I won't overwhelm you with an exhaustive list in this guide as artists often have diverse preferences and recommendations. I'll focus on the equipment I personally use, while also offering budget-friendly alternatives when applicable. For additional guidance and different setup ideas, I'll try to include links to various videos that might aid you in making an informed choice.

Airbrush Gun

The airbrush gun is your go-to instrument for applying paint to your model. This handheld tool utilises compressed air to spray paint or other media onto the miniature's surface.

You want to opt for a double-action gravity feed airbrush. In simple terms, "double-action" refers to a lever mechanism that lets you independently regulate the airflow and paint flow. Meanwhile, "gravity feed" simply means that the paint cup is positioned above, as opposed to below or on the side, ensuring a smooth and efficient application.



IWATA Eclipse HP-CS

The airbrush I use comes highly recommended for its versatility, positioned as an exceptional all-rounder suitable for various tasks. It strikes a balance with an average price point and exceptional engineering and design. Featuring a 0.35mm needle - right in the middle of the recommended range - and a convenient backstop mechanism, it ensures precision and control.

Notable attributes include its well-crafted, straightforward design, delivering a smooth and precise spray capable of creating thin, delicate lines. As a well-known brand and model, it has earned its reputation through extensive testing by artists who appreciate its performance. The smooth and precise trigger, coupled with a 0.35mm needle and ideal nozzle size, caters to moderate to fine spray patterns. Its user-friendly nature, including easy cleaning, makes it particularly suitable for beginners. You can pick this particular airbrush up for around £150.

The video by Vince Venturella explores different airbrush brands and their features, demonstrating how most airbrushes can be used for various tasks, but explains how higher-end models offer greater precision and control:



No matter which airbrush you choose to purchase, the key consideration is ensuring easy access to replacement parts. Over the lifespan of your airbrush, certain components may need replacing due to mistakes or regular wear and tear. It's a significant advantage if you can conveniently acquire replacement parts, saving you from the necessity of buying an entirely new airbrush.

Compressor

The compressor plays a pivotal role in producing pressurised air which propels paint from the gun onto the model's surface. It's advisable to choose a compressor equipped with an air storage tank and an air pressure regulator. These features are essential because you'll be employing varied air pressures for different tasks.

Incorporating a storage tank in your compressor ensures it runs only until the tank is filled, automatically switching off thereafter. This feature provides a silent operation for the majority of your session, which proves particularly handy. The constant hum of a running compressor can be annoying at times and this becomes especially relevant for me as I do most of my hobbying during the evenings, mindful of keeping things quiet for my sleeping child.

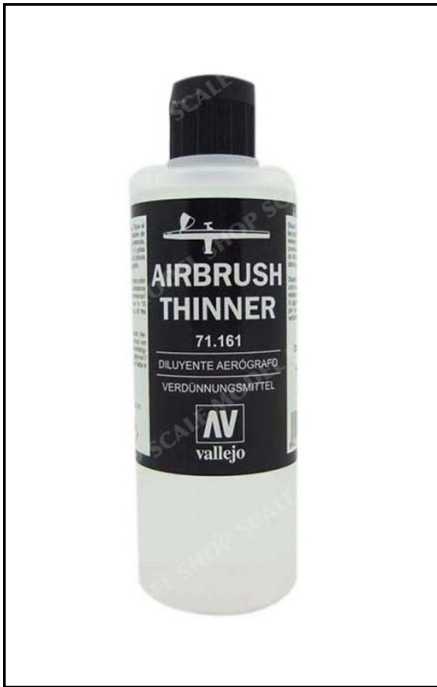
I've opted for the Sparmax TC-610H Plus, a choice that came highly recommended by fellow hobbyists. It runs relatively quietly, boasts the convenience of a storage tank, and adds a touch of aesthetic appeal to my hobby room due to its black metal covering case. Priced at around £250, it's a worthwhile investment for a reliable and visually pleasing compressor.



The video by International Scale Modeller is a great review of the Sparmax TC-610H compressor, discussing its unboxing, features and performance. It highlights the build quality, quietness and reliability of the compressor as well as its suitability for airbrushing tasks.

Hose

Connecting your compressor to the airbrush requires a hose which is typically included with most compressors - just ensure it's part of your purchase. Additionally, check that the thread size of the hose connector matches the airbrush valve screw which may vary among manufacturers. No need to fret if they differ; adapters are easily accessible online.



Thinner

Typically, paints straight from the bottle are too thick for airbrush use requiring thinning to achieve the proper consistency. Following the lead of Vince Venturella, a combination of thinner and flow improver works well for airbrushing, a method I also adopt. Keep in mind that certain paints may necessitate specific thinners, so it's wise to check when experimenting with new products.

Whilst there are various brand options for airbrush thinner, I personally use Vallejo and have consistent results. Based on my experiences, I recommend Vallejo as a reliable choice for airbrush thinner.

Cleaning Kit

An airbrush cleaning kit comes with all the essentials for keeping your gear in top-notch condition. Maintaining your airbrush is crucial for its proper functioning and long lifespan. You might already have some of these items at your disposal, but a standard cleaning kit usually comprises airbrush cleaner, lubricator, cleaning brushes, and specific tools tailored to various brands. This ensures your airbrush remains in peak condition for the long haul.



As my gun is an iwata airbrush, I purchased their [own branded cleaning kit](#) which includes everything needed for the maintenance side of things

Cleaning Pot

A cleaning pot typically consists of a container with a filter and a holder for the airbrush, allowing excess paint and cleaning fluids to be sprayed into the pot, preventing overspray and keeping the work area clean.

If you want to be fancy and get a branded cleaning pot, iwata do this really nice one which you can find [here](#) however this [budget paint pot](#) is going to do the exact same job.



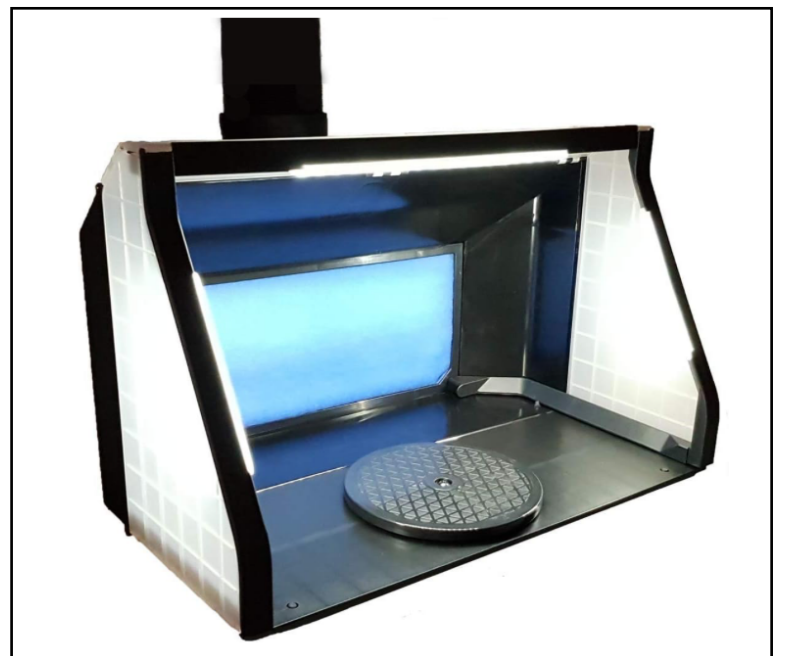
Respirator

When it comes to safety, I strongly recommend using a face mask or respirator. While disposable dust masks suitable for DIY tasks are sufficient, I'd suggest opting for something more durable, like a 3M respirator, for added protection.

[This specific respirator](#) stands out for its exceptional quality, though it comes with a higher price tag. However, if budget is a concern, there are more economical versions like [this one](#) available that still offer effective filtration for the majority of particles.

Spray Booth

While I understand not everyone has room for an airbrush booth, if you can manage it, I highly recommend investing in one. Even though airbrushing allows for precision, a bit of overspray is inevitable - especially during priming or applying base coats to larger models. A spray booth efficiently captures this overspray. Beyond the practical concern of paint on your desk and surrounding areas, there's the important matter of avoiding inhalation of atomized paint particles. For a prolonged and enjoyable airbrushing experience, a spray booth proves invaluable and is a worthwhile investment if space permits.



Spray booths typically come in two types: one equipped with built-in filter pads to trap paint particles, and another with extraction hoses. If your spraying area is close to a window, I recommend the latter as it tends to have better suction.

I've incorporated this [BARTSHARP airbrush booth](#) into my setup. Fortunately, space isn't an issue in my room, and the booth, strategically placed in front of a window, allows me to maximise the effectiveness of the extractor hose. This booth stands out for its larger size, featuring a built-in turntable and light. With a double fan motor for enhanced suction and a washable filter pad, it offers comprehensive functionality.

If space is a constraint, and venting out of a window isn't feasible, [this option](#) might be more suitable. Operating by drawing air through a dual-layered filter pad to capture airborne paint particles, it eliminates the need for an extraction hose and can be positioned flexibly. Its compact design allows for easy storage as it folds away when not in use. The washable and replaceable filter pads ensure longevity, making it a superior choice compared to not having a booth at all.

Thinning Your Paints

Thinning paint before using it in an airbrush is essential for achieving optimal results in the spraying process. The viscosity of paint directly influences its flow through the airbrush nozzle and onto the surface being painted. In an airbrush, a low-viscosity paint is necessary to create a fine mist that ensures even coverage and smooth application. Thinning the paint allows it to flow easily through the airbrush, preventing clogs and providing greater control over the spray pattern. Additionally, thinning helps prevent the formation of splatters or uneven textures on the painted surface, resulting in a smoother finish.

When preparing your paints for airbrushing, it's common to use Airbrush Thinner. A typical ratio like 1:1 or 1:2 often works well, but finding the right mix may require some experimentation. There's no rigid formula or rule; it depends on factors like the painting technique, the specific paint or air pressure etc.

If your paint is overly thin, when it hits the surface, it may form a spider web type pattern where the paint starts to run when it hits the surface. In such cases you need to aim for a slightly thicker consistency.

On the flip side, if the paint is too thick it might appear chalky and create paint speckles. If that happens, consider thinning it down a bit for a smoother finish.

Don't stress if you don't nail it on the first try. Achieving the right balance takes time and practice. Even with experience, it's always a good habit to test your paint and its flow - try it

on your hand or a scrap of paper - before applying it to your model. This way, you ensure a controlled and desirable outcome.

RobPaintsModels explains the process of thinning paints in this video, emphasising the importance of proper paint consistency to avoid clogging and achieve smooth blends. He discusses different paint brands and provides tips on adding drying retarder and adjusting air pressure to prevent tip dry and spattering. The video also highlights the benefits of thinning paints for easier cleaning and faster colour changes:



How to use your Airbrush

Before you even use your airbrush, it's a good idea to know how to disassemble it and then of course reassemble. Understanding this is crucial for maintaining its functionality and longevity. Regular cleaning, which involves taking apart the components, helps prevent clogs and ensures the removal of any dried or leftover paint. This process is not only essential for troubleshooting issues like leaks or malfunctions but also allows for customisation and modification based on individual preferences or specific techniques. Additionally, the ability to dismantle and reassemble the airbrush contributes to optimal performance by inspecting and maintaining critical parts, ultimately extending its lifespan and ensuring consistent, high-quality results. There are various YouTube tutorials for different brands and models of airbrush that will teach you everything you need to know about its assembly.



Once you've become acquainted with your airbrush and adeptly assembled it, it's time to initiate the airflow and engage in some practice.

Begin by linking the compressor to your airbrush using the hose. Switch on the compressor and you'll notice it starting with a gentle rattling sound accompanied by the gauge indicating a gradual increase in pressure. Allow a minute for it to reach around 25PSI and make adjustments using the pressure regulator if the pressure seems too low or escalates too high. It's important to mention that the PSI you choose, as set on the pressure gauge, can vary based on a few factors. You may find that recommendations range from as low as 20 PSI to as high as 30 PSI. Therefore, starting at around 25 PSI serves as a balanced midpoint for beginners.

Before adding anything to the cup, take some time to experiment with your airbrush using only air. Get to know the double-action lever – press it down for air, pull it back for paint. For a controlled paint spray, follow this sequence: press down, pull back, push forward, then release. Familiarising yourself with these steps will help you achieve the desired results when you start working with actual paint.

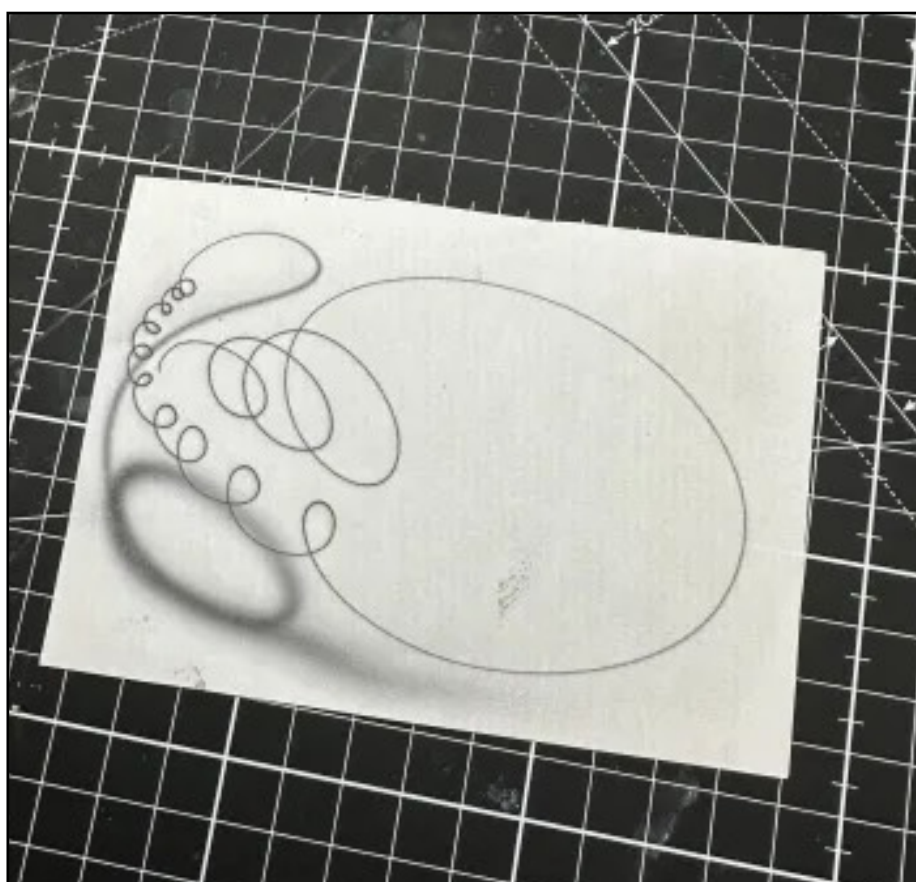
Once you feel at ease with your airbrush, give it a go with some water in the cup. Spray the water onto a piece of card to grasp how your trigger control influences the liquid flow through the brush.

After completing the earlier steps, it's time to dive into actual painting with your airbrush. To start, I highly recommend grabbing some blank paper and practicing with dots, lines, and circles of various sizes. These exercises serve as valuable drills to refine your airbrush skills, focusing on control, precision and understanding paint flow.

Experiment with shooting dots of paint from different distances in a grid formation. This will give you insights into using distance and trigger control to create different diameters.

Practise lines of varying lengths to refine your trigger control—begin by opening the air flow, followed by the paint flow, and then reverse the process toward the end of the line. The goal is to avoid any paint blobs at the start and end of your lines.

Follow the lines of circular drawings to enhance your aim and precision, preparing you for painting small areas on miniatures.



On a blank piece of paper, attempt to achieve gradients, starting from maximum opacity working towards almost white as you move across the page. This exercise helps you get a feel for general airbrush spraying and hones your control over paint flow.

While the temptation to jump straight into painting miniatures may be strong, following these exercises will give you a significant advantage. Once you feel comfortable with these drills, you'll be well-prepared to move on to painting your miniatures.

Now we can apply everything we've learned in practice. One last thing to consider is when using the airbrush on your miniatures, I recommend maintaining a distance of approximately 3 inches (7.5cm). This distance typically yields a high-quality finish.

With time, you'll become more at ease and discover your own preferences. Remember, every artist is unique and even individuals with the same equipment may develop their own distinct approach. Embrace the process of finding what works best for you.



Maintenance

Regularly cleaning and maintaining your airbrush is vital to its overall performance and longevity. Without proper care, dried paint and residue can accumulate in critical components, leading to clogs and affecting the airbrush's ability to function smoothly. Over time, this build-up can diminish precision, create uneven spray patterns and even cause malfunctions. By incorporating regular cleaning into your airbrush maintenance routine, you not only prevent potential issues but also ensure consistent results in your artwork. Additionally, proper maintenance helps extend the lifespan of your airbrush, reducing the likelihood of parts breaking or failing prematurely. Regular care is an investment in the reliability and effectiveness of your airbrush, ultimately contributing to the success and quality of your painting projects.

Certain maintenance tasks can be carried out on-the-go while using the airbrush, while others necessitate the disassembly of specific parts. The latter should be integrated into a periodic maintenance routine, unless issues arise with your airbrush, in which case a thorough cleaning is advisable. This approach ensures a balance between regular upkeep and addressing any unexpected challenges that may arise during your painting sessions.

Iwata provides videos covering various maintenance levels. These include quick colour changes, end-of-session cleaning tips, and deep-cleaning instructions for your airbrush. Personally, I've learned and shaped my maintenance routine based on these videos. I highly recommend watching and following all three of them for effective maintenance practices:

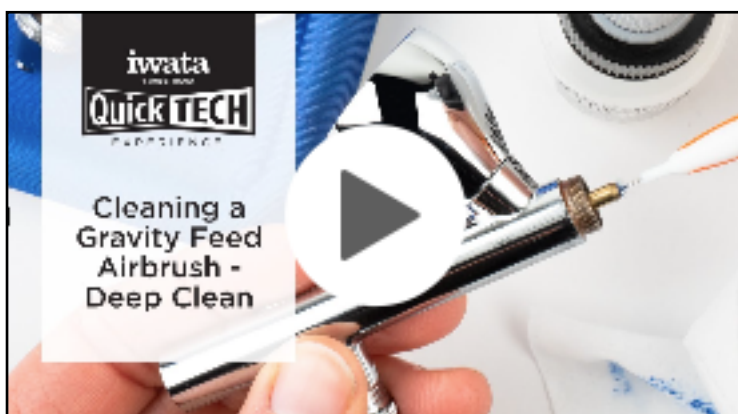
Quick Colour Change



End of Spray Session



Deep Clean



Troubleshooting

Here's a handy guide outlining potential issues you might encounter while using your airbrush along with practical solutions. These suggestions are designed to help you troubleshoot and address any problems you may face during your airbrushing sessions.

Problem	Cause	Solution
Paint isn't Spraying	Bent needle	Replace the needle
	Paint drying on the needle	Clean the needle with a swap and cleaning solution
	Paint is too thick	Add thinner as required
	Nozzle is clogged	Disassemble airbrush and thoroughly clean the nozzle
Paint Spider Webbing	Paint is too thin	Add less thinner when mixing
	PSI too high	Reduce pressure as required
	Airbrush too close to miniature	Increase spraying distance
Paint Spattering	Paint drying on the needle	Clean the needle with a swap and cleaning solution
	PSI too low	Increase pressure as required
Airbrush spitting water	Moisture trap full	Empty the moisture trap
Air bubbling in the cup	Air is escaping from somewhere within the airbrush.	Do a deep clean and reassemble
Paint bubbling from the side of the airbrush	Component not tightened enough.	Ensure that it is tightened correctly
	Faulty O ring seal failure.	Replace O ring
Needle is stuck & trigger loose	Needle is stuck to the inside of the airbrush.	Deep clean and reassemble
Paint spraying from the gun without pulling back the trigger.	Needle is not flush with the nozzle.	Unscrew the rear of the airbrush and push the needle forward

Lyla Mev has an insightful video that delves deeper into the troubleshooting guide above. In her video, she provides comprehensive solutions for most of the issues outlined in the table, offering practical demonstrations on how to fix these problems. It's a valuable resource for gaining an understanding of troubleshooting and resolving issues with your airbrush:



SCULPTING & KITBASHING

In the art of miniatures models, sculpting refers to the process of shaping and adding details to a miniature using a sculpting material such as putty, clay or green stuff. It involves moulding and manipulating the material to create various textures, forms, and features on the miniature.

Sculpting allows miniature painters to enhance the details and bring their creative visions to life. It enables them to add custom elements, modify existing parts, or even create entirely new components for their miniatures. This process requires a steady hand, precision and a good understanding of anatomy and proportions to achieve realistic and visually appealing results.

Miniature sculptors often use a variety of tools and techniques to achieve their desired effects. These may include sculpting tools, brushes and specialised sculpting materials. The level of detail and complexity in sculpting can vary greatly depending on the artist's skill, the scale of the miniature and the desired outcome. Sculpting is something that allows artists to add depth, character and uniqueness to their creations, making each miniature a one-of-a-kind work of art.



Credit: [eric miniature painting](#)

Kitbashing on the other hand refers to the practice of taking parts from different kits and combining them to create a custom miniature. This technique allows hobbyists to personalise their miniatures by mixing and matching various components such as weapons, armour, heads, and other accessories. Kitbashing is popular among miniature painters and modellers as it offers a creative way to bring unique and original designs to their projects. By using parts from different kits, hobbyists can create one-of-a-kind miniatures that reflect their own style and vision.

While sculpting and kitbashing are distinct techniques, they often intersect. Kitbashing frequently demands the use of sculpting techniques to seamlessly merge different model pieces, ensuring a natural look. When kitbashing, selecting compatible parts is crucial, but ultimately, the quality of the sculpt determines the final appearance of the piece.



Credit: [matties minis](#)

This video tutorial by The All-In Nerd teaches you how to properly mix and sculpt with Green Stuff. The tutorial covers basics such as mixing the two parts in equal amounts, working with wet fingers or tools, fixing gaps and repairing broken parts, sculpting cloth and hair, creating cool bases, and using liquid Green Stuff and homemade alternatives. Overall, it provides a comprehensive guide for beginners and enthusiasts looking for an introduction to the art of sculpting with Green Stuff:



Once you have grasped the basics of sculpting, Juan Hidalgo presents a comprehensive tutorial offering a detailed walkthrough of crafting cloth and capes from start to finish. Using Green Stuff, Juan demonstrates how to sculpt layers, carefully shaping them to achieve lifelike folds and textures. He also showcases the process of refining the sculpted cloth with sandpaper to enhance its realism and appearance:

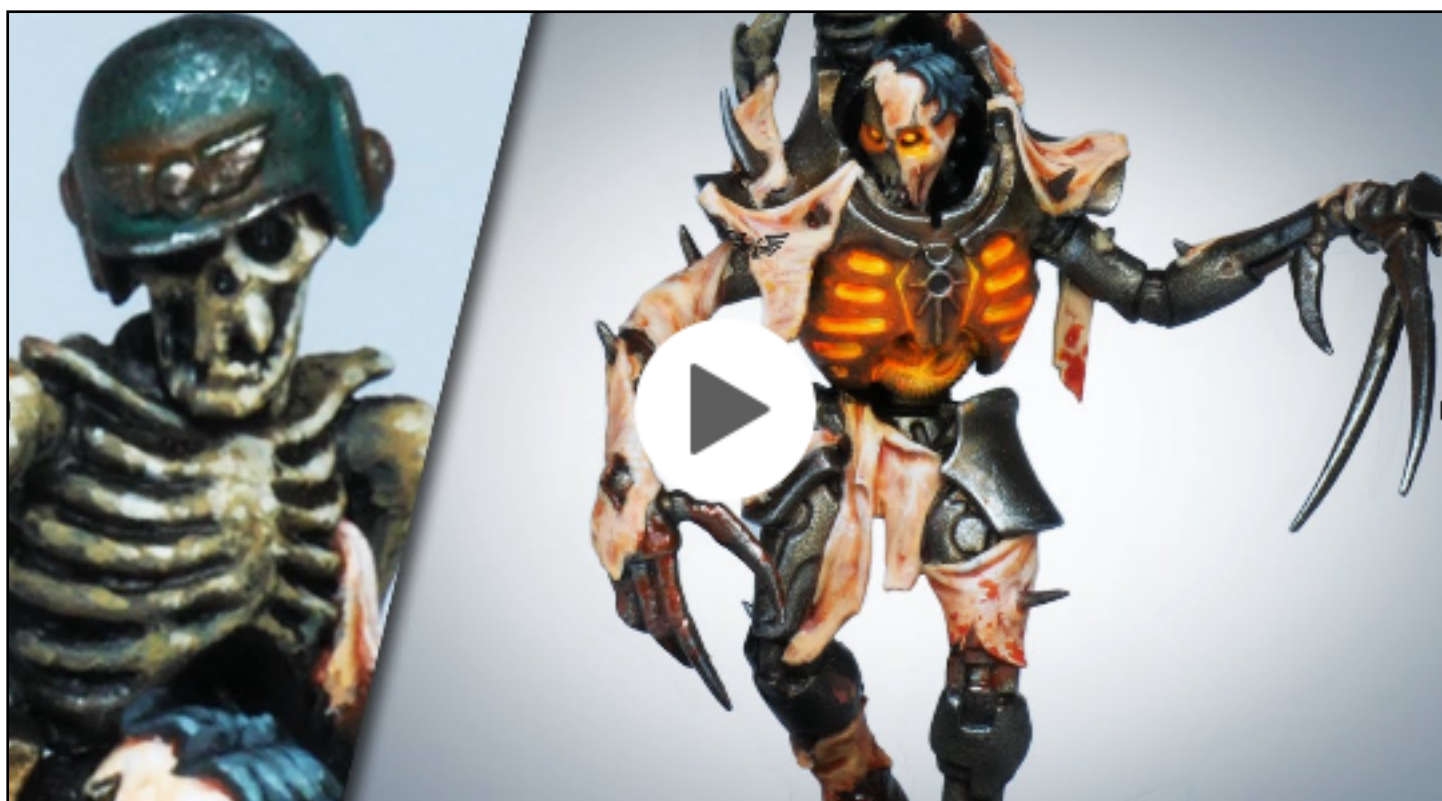


He also has this excellent [playlist](#) offering tutorials for sculpting different materials and textures on your miniatures.

The video by SprayBlack Studios provides simple tips for improving green sculpting, including selecting the right tools, keeping the tools clean, using a barrier between the tool and the putty and allowing the putty to cure for better shaping. It's a short video and definitely worth a watch to gain a little extra knowledge on the topic:



Finally, in this video, Trovarion demonstrates how to put the two techniques together. He showcases a kitbashing project featuring a Necron model, giving it a larger and more menacing look inspired by the *Twice Dead King* novel. While not a step-by-step guide, this video provides valuable insight into the transformative process achieved through sculpting and kitbashing techniques.



PHOTOGRAPHING YOUR MINIATURES

You're likely to want to take photos of your miniatures throughout the process and once your miniature is complete. Sharing your creations on platforms such as Instagram or Reddit is a great way to get feedback on your miniatures. Getting the perfect photo, however, isn't easy. But, there are things you can do to help get the best photos whether you're using your phone or a digital camera.

Choosing a simple plain background is normally the best option as this allows all the focus to be on your miniature. Depending on the mood of the photo you're looking for, a black, grey or white background will normally be the best option. A simple sheet of paper tacked to the wall is a really cheap and effective backdrop. If you're more serious about photographing miniatures, then you may wish to purchase a photo box or a specific photography background.

Good lighting is essential. If you have a hobby lamp, these normally work fine. The LEDs can give harsh shadows and lighting if they are very bright, but a sheet of parchment paper can make a great light diffuser and soften the light. You will likely have worked hard to create highlights and shadows using various painting techniques, and harsh lighting can detract from your miniature. Move the light around to get a good light that shows off your painting. Don't be tempted to have your light too close to your miniature. Having multiple light sources can be really useful in eliminating unwanted shadows but not always necessary. Make sure your flash is turned off as this creates very harsh shadows and can undo the efforts of your various lighting sources.

Where possible, use a tripod when taking your photos or at least prop your phone or camera up against something to reduce the amount of movement which can happen if you are trying to stabilise your camera or phone by hand. To reduce unintended camera movement further, use a timer or a remote control to take your photo so you don't touch and accidentally shake your device causing unwanted blurring (even the smallest movement can make your photos appear blurred or unclear).

Don't be tempted to zoom in too much. If you're taking photos with a phone, most have a very limited optical zoom and using a digital zoom often reduces the quality of your photo. Take a photo at a distance where you are able to focus well and then crop your photo afterwards to make sure the subject takes up a good amount of the photo.

Squidmar miniatures has a really useful video showing how some very simple equipment can get you a really good photo, along with some helpful hints on where to place your miniature and lighting:





For camera phones, you really don't have much control over the settings when using the stock camera app. You can play around with exposure and then do some very minor editing in your photo app. There are a few apps out there which allow you to edit settings before or during the photographing stage, namely Adobe Lightroom and Camera+ app. Lyla Mev has an excellent video showing how to make the most of Lightroom on your phone (the phone app is free):



For digital cameras, particularly DSLR cameras, you often have a lot of control over the settings and you can utilise these to get even better photos. If you have good lighting and your model in focus, most modern DSLR cameras will do a good job at taking a good photo, but you can play around with some of the settings.

Aperture - this is the amount of light let into your camera by physically changing the size of the 'iris' in your camera. It's worth noting that the smaller the f-stop number, the bigger the opening and more light will be hitting the sensor. But with this comes a narrow focal range, so you may find part of your miniature is in focus whilst something in the foreground or background is blurred. A larger f-stop number will bring all your miniature in focus, but you will need to make sure plenty of light hits your camera sensor. Choose a middle ground for your aperture; f/4-f/8 is normally perfect.

Shutter speed - this is the amount of time the shutter is open. The longer it is open, the more light is hitting your cameras sensor. Think of it in extremes. If it is very bright and you have a long shutter speed, your photo may come out just white. Or the other way, if it is very dark and you have a very short shutter speed, you are likely to miss a lot of detail. Play around with shutter speed depending on what light you use and the effect you're going for. For longer shutter speeds, you will definitely need a tripod as unintentional camera movement is hard to avoid.

ISO - This depicts how sensitive your camera is to light. If you have plenty of light and a longer shutter speed, choose a low ISO as this will give you a better image quality. If you have low light levels then you can choose a larger ISO, but be mindful that your photo may appear grainy at higher ISO levels (personally, I rarely go over 400). If you find you are increasing your ISO levels, consider increasing your lighting.

Finally, Trovarion Miniatures has one of the most useful videos out there for photographing your miniatures including the set up, what settings to use and some basic editing:



HOBBY STORAGE AND HOBBY SPACE

Having a dedicated hobby space for painting miniatures is beneficial for several reasons. Firstly, it allows you to have a designated area where you can focus solely on your hobby without distractions, which can help improve your concentration and creativity. Additionally, having a specific space for painting miniatures can help you stay organised and keep all your supplies in one place, making it easier to find what you need when you need it.

Storage options for your miniatures after finishing painting them are also beneficial for several reasons. Firstly, proper storage helps protect your painted miniatures from dust, dirt, and damage, ensuring that your hard work and effort in painting them is preserved. Additionally, organised storage options make it easier to locate and access your miniatures when you want to use them for gaming or display. Many storage choices also double as convenient travel companions and make them ideal for gaming events, tournaments or everyday commutes.

Below you will find a variety of workspace and storage options for you to explore featuring different designs, price points and functionalities.

Miniature Storage

There are various choices for storing miniatures, with new solutions emerging as the hobby progresses. In the past foam storage was the primary option but today we have a range of alternatives including foam, various magnetic options, clip-in systems and more.



WARMAG

WARMAG's magnetic storage system is an affordable yet reliable solution for safeguarding and transporting your miniatures.

At its core is the "really useful box," available in sizes ranging from 4L to 9L and 9L XL, offered in a variety of colours to complement your chosen army. Once you've selected your preferred box, simply acquire one of the self-adhesive magnetic sheets tailored to fit snugly inside. Each sheet comes with corresponding sticky labels, allowing you to easily identify the contents of each box. These sheets also offer customisation with various colours and designs to match your miniature collections. Finally,

complete the setup with magnetic bases for your miniatures, which can be seamlessly integrated into their bases or rims, depending on your choice of base.

When all components are assembled, you'll enjoy a robust magnetic hold that keeps your figures securely in place during transit and storage. While we don't recommend vigorously shaking the boxes or holding them upside down, numerous users have reported confidently doing so with no movement from their figures. With WARMAG you can rest assured that your miniatures will reach their destination unscathed - whether it's your local War Gaming Club or a gathering of enthusiasts.



Foam Cases

Foam cases and bags are specially designed storage containers for miniatures. These cases typically have foam inserts that are custom-cut to fit each individual miniature, ensuring that they are securely held in place and protected during transport. The foam padding helps prevent the miniatures from shifting or getting damaged while being moved around. Foam cases come in various sizes and configurations to accommodate different types and quantities of miniatures and include handheld, over shoulder and backpack bags. They are a popular choice among enthusiasts who want to safely transport their miniatures to gaming events.



Feldherr provides an extensive range of top-quality foam storage solutions, making them a standout choice for anyone considering this option.

It's important to mention that foam cases - while commonly used for miniature storage, - can pose a risk of damaging the paint on your miniatures over time. Repeated insertion and removal of miniatures can cause abrasion, particularly affecting sharp features like swords or spikes, which may become stuck in the foam and sustain removal of paint.

Mechi Cases

Mechi offers a unique alternative to traditional foam or magnet-based storage solutions for miniatures. Their ingenious mechanism securely grabs miniatures by their bases, minimising the risk of damaging delicate features often associated with foam storage. This innovative approach not only protects your miniatures but also saves time that would otherwise be spent affixing magnets.

Available in various sizes to accommodate both small and large armies, Mechi cases are a versatile choice. However, the advanced technology and design behind these cases are reflected in their price, with a full-size Mechi case typically costing over £100.

What sets Mechi cases apart is their modular assembly.

With the online case builder tool, users can customise a case tailored to their specific army's needs. The MechiMax Modules are interchangeable and reconfigurable, accommodating different-sized bases and collections. This adaptability ensures that the case can evolve over time to meet changing storage requirements.



A-Case Carrier

An A-Case Carrier is a premium, lightweight and durable backpack designed specifically for transporting miniature armies. It features an aluminium frame with steel trays for secure storage, and padded backpack straps for comfortable carrying. The A-Case Carrier provides excellent protection for miniatures during transport, thanks to its sturdy construction and shock-absorbing materials. It also includes multiple pockets and compartments for

organising and storing accessories. The A-Case relies on a magnetic system to secure your miniatures in place during transit and the steel trays within the A-Case Carrier can be customised to fit different miniature sizes and configurations, allowing hobbyists to tailor the storage space to their specific needs.

Hobby Spaces

Creating a designated hobby area can significantly enhance your productivity. These spaces vary widely, from luxurious dedicated hobby rooms to practical portable setups like painting stations housed in cases or boxes. Some even craft their own DIY portable hobby stations, perfect for bringing along on travels.

Below you will find some hobby stations from various companies and ideas, offering unique designs, affordability and practical features.

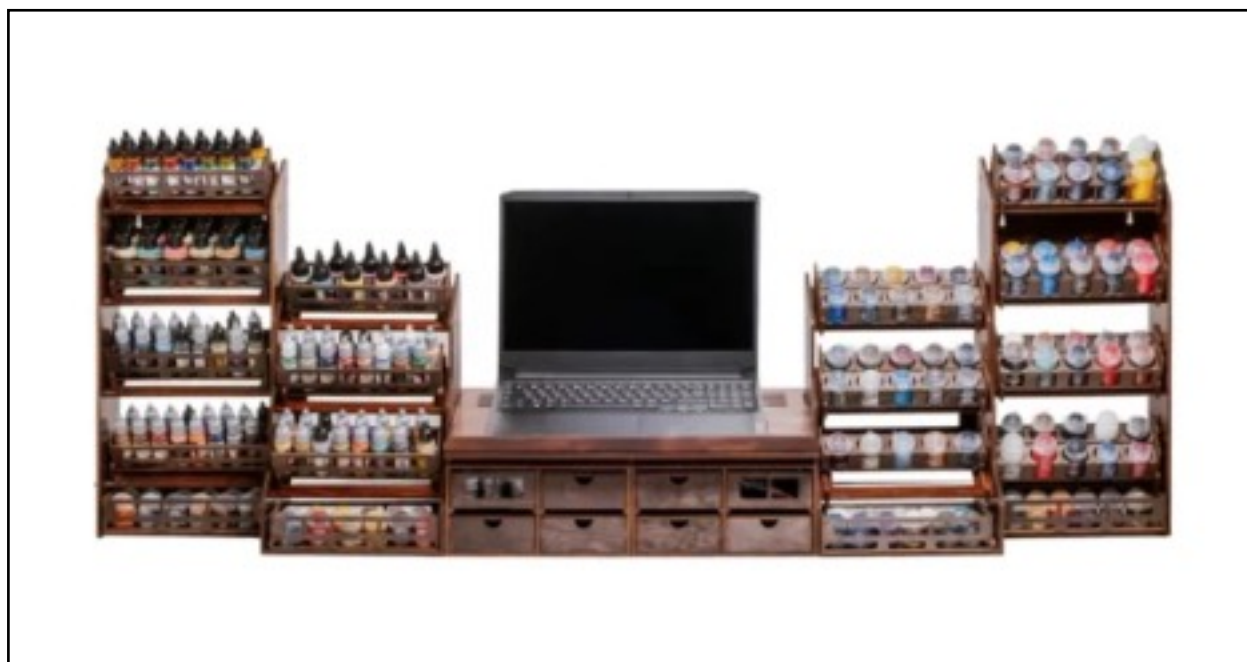
Frontier Wargaming

Frontier Wargaming is renowned for crafting versatile portable and tabletop paint and hobby storage solutions. Their products are highly customisable, allowing you to tailor each station to your specific needs.

For those seeking portable options, the Paint Case 2.0 and Paint Chest are top choices. Both feature convenient handles or straps for easy travel and customisable inserts, including Tool Boxes, Paint Trays, and Miniature Holding Trays. The Paint Case 2.0 accommodates 6 modules, while the larger Paint Chest can hold up to 12. Additionally, both come with optional LED lighting, perfect for on-the-go painting sessions.



If you have the luxury of a dedicated hobby space, Frontier Wargaming offers modular tabletop painting stations such as wall racks, paint stands, and storage systems. These can be personalised to your preferences, ensuring an ideal layout for your hobby equipment. While most products are supplied unassembled, assembly options may be available at checkout for added convenience.



HobbyZone

Transform your hobby space into a streamlined and organised workspace with the HobbyZone Modular System. Crafted primarily from MDF framework with varied thick card and acrylic components, each module offers a sturdy foundation for your hobby endeavours.

With a diverse array of modules available, you can effortlessly store, organise, and utilise your model making and painting tools. Whether your workspace is spacious or compact, the modular system accommodates different widths (20/30 cm) and includes special corner modules for seamless integration. Held securely in place by robust neodymium magnets, these modules allow for versatile workshop expansion both horizontally and vertically.

From paint storage to drawers of various sizes, brush holders, and additional storage options, HobbyZone's modules offer comprehensive solutions for hobbyists. Moreover, their website features a user-friendly 'designer' tool, enabling you to input your workspace dimensions and create a virtual modular hobby station tailored to your needs before purchasing.

It's important to note that most HobbyZone products are delivered unassembled. Assembling these modules can be time-consuming, involving cutting from MDF housings and gluing together.



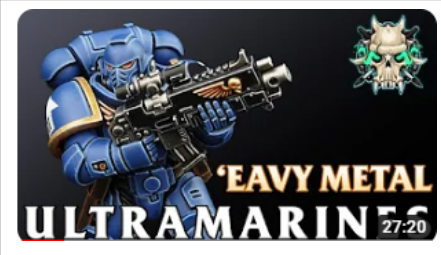
DIY

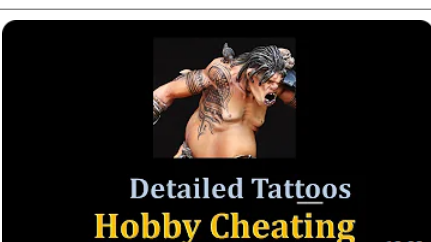
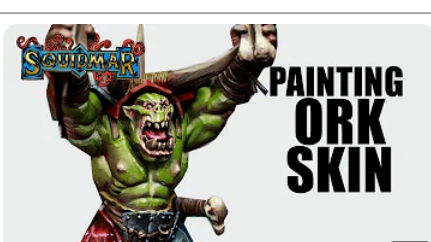
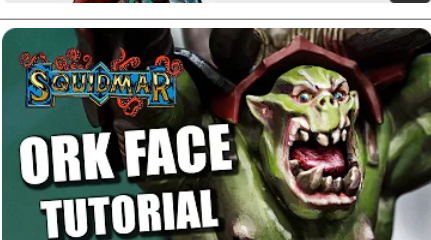
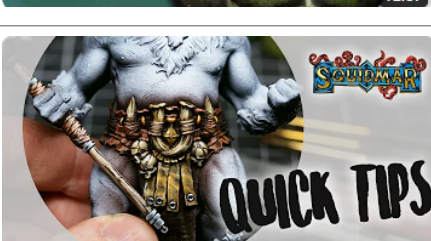
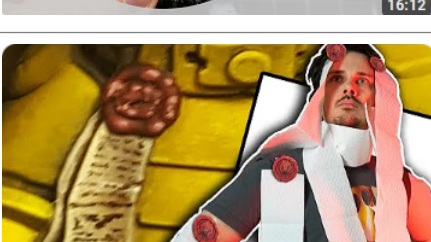
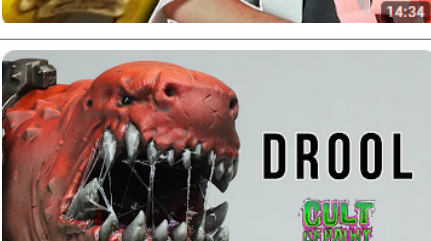
It's important to mention that you can create fantastic DIY hobby stations, whether they're portable or tabletop setups. Hobbyists have developed numerous creative ideas and solutions over time, often using everyday items in clever ways. This DIY approach can be not only cost-effective but also incredibly practical.

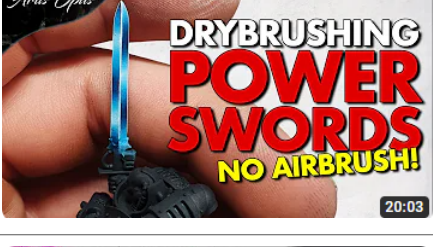
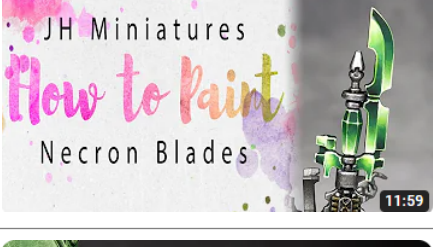
For instance, toolboxes can serve as portable stations, nail polish holders can store paint, and small component drawers make great storage solutions. The options are limitless! While these products may not be designed specifically for hobbies, they typically come with a lower price tag, even though they might lack a bit in aesthetic appeal.

FREE TUTORIALS

Explore a collection of complimentary tutorials from various YouTube channels that I have found very helpful since returning to the hobby. They are designed to guide you through diverse techniques for painting your miniatures from experimenting with various colours and tones to achieving special effects. While there are numerous artists sharing similar tutorials, this list comprises essential videos tailored to address specific queries on miniature painting. Feel free to discover other tutorials that may better match your preferences and if you think something is missing from this list that is essential, don't hesitate to reach out!

	<u>How to paint Ork Skin the 'Eavy Metal way by Infernal Brush</u>
	<u>Faces 3 Ways! From Beginner to Artisan! By Duncan Rhodes</u>
	<u>How to paint Dark Angels EXACTLY like the box art! full 'Eavy Metal Masterclass - Start to finish by Infernal Brush</u>
	<u>The EASIEST BLACK ARMOUR tutorial. Just THREE steps by JuanHidalgo Miniatures</u>
	<u>How to paint Ultramarines like the box art! by former 'Eavy Metal painter Infernal Brush</u>
	<u>Painting Blood Angels like the box art - SECRETS revealed by former 'Eavy Metal painter Infernal Brush</u>

	<u>Grimdark Blood Angels by Trovarion</u>
	<u>Grimdark Ultramarines by Trovarion</u>
	<u>How to paint White Hair by Vince Venturella</u>
	<u>How to paint detailed Tattoos by Vince Venturella</u>
	<u>How to paint Ork Skin for Warhammer Tutorial - Orruk Warclans (NO CONTRAST) by Squidmar</u>
	<u>How to paint Ork Face Painting Tutorial - Orruk Warclans by Squidmar</u>
	<u>Mastering The Basics: skulls, bones, horns & leather on Miniatures by Squidmar</u>
	<u>How to paint Purity Seals by Trovarion</u>
	<u>How to paint drool and saliva by Cult of Paint</u>

	<u>How to paint realistic gems by Troviarion</u>
	<u>How to paint realistic flames by Artis Opus</u>
	<u>How to paint a Power Axe by JuanHidalgo Miniatures</u>
	<u>How to paint Molten Weapons by 2brushes1cup</u>
	<u>How to paint Power Swords by Cult of Paint</u>
	<u>How to paint a Power Sword by Artis Opus</u>
	<u>How to paint Necron blades by JuanHidalgo Miniatures</u>
	<u>Painting plasma glow without an airbrush by JuanHidaglo Miniatures</u>
	<u>3 ways to paint Cloaks by Duncan Rhodes</u>

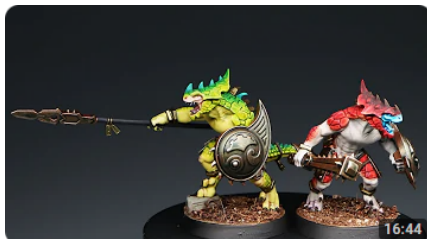
	<u>4 Amazing Battle Damage Techniques for your Warhammer by Duncan Rhodes</u>
	<u>How to Paint Leather FAST - 3 ways: Contrast, Shade, Stipple by Artis Opus</u>
	<u>How to Paint ROTTEN WOOD by Cult of Paint</u>
	<u>How to Paint Wood FAST: 3 ways - Contrast, Drybrush, Wash/Shade by Artis Opus</u>
	<u>How to paint Yellow by Darcy Bono Creations</u>
	<u>How to paint White Scars by Cult of Paint</u>
	<u>How to Tyranid Paint Carapace *ANY* colour - Contrast Hacks by Artis Opus</u>
	<u>Painting a Tyranid Inspired by this CLASSIC Art! By Infernal Brush</u>
	<u>How to paint Tau Sept & Vior'la Armour - Quick box art recipes</u>



HOW TO PAINT KRONUS HEGEMONY LEAGUES OF VOTANN:
A Step-By-Step Guide by Brushstroke Painting Guides



How to Paint: Stormcast Eternals I Dominion by Artis Opus



How to Paint SAURUS WARRIORS I SERAPHON I LIZARDMEN I
AGE of SIGMAR by Cult of Paint



The ONLY Painting Skills you'll ever need! By Trovarion